

# 2009 CSR REPORT

CORPORATE SOCIAL RESPONSIBILITY



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The "Chronology of CSR Activities" and "GRI Guideline Balance Sheet" can be viewed at the "Efforts for CSR" section of ADEKA's website ([www.adeka.co.jp](http://www.adeka.co.jp)).

## Company Profile

<b>Name:</b>	<b>ADEKA CORPORATION</b>
<b>Established:</b>	January 27, 1917
<b>Representative Directors:</b>	Kunihiko Sakurai, President
<b>Head Office:</b>	7-2-35 Higashi-ogu, Arakawa-ku, Tokyo
<b>Paid-in Capital:</b>	22.899 billion yen (as of March 31, 2009)
<b>Number of shares issued:</b>	103,651,442 (as of March 31, 2009)
<b>Employees (consolidated):</b>	2,697 (as of March 31, 2009)

## Description of Business

Chemicals	
IT-related and electronics chemicals	Imaging materials, Optical recording materials, Optical hardening resins, High-purity materials for semiconductors, AFES System and etching agents, and others.
Functional chemicals	Additives for polyolefines, PVC stabilizers, Flame retardants, Epoxy resins, Polyurethanes, Water-borne resins, Water-swelling sealing materials, Surfactants, Lubricant, Metal working fluid, and others.
Commodity chemicals	Caustic soda, Silicate-induced products, Industrial fats and oil-induced products, Propylene glycol, Hydrogen peroxide, and others.

Food products	
Margarines, Shortenings, Oil and fats for chocolate, Oil and fats for frying, Whipping cream, Enriched milk products, Fillings, Frozen pie crusts, Mayonnaise dressing, and others.	

Other	
Design of equipment plants, Construction and construction management, Maintenance of equipment, Logistic services Warehousing, Leasing of vehicles, Real estate and insurance business, and others.	



## Editorial Policy

### ■ Period Covered by this Report

April 1, 2008 ~ March 31, 2009  
(The content of activities from FY2009 has been included in certain sections of this report.)

### ■ Scope Covered by this Report

The scope covered by the environmental report within this report includes ADEKA CORPORATION and the 10 companies listed below from among the group's businesses. In some cases group businesses are not included, depending upon the item. In such cases the scope covered has been mentioned within the text. Whenever ADEKA CORPORATION alone is being indicated within this report then "ADEKA" or "our company" is listed, and when the ADEKA Group as a whole is being referenced it is listed as the "ADEKA Group."

Targeted Group Company Names:  
Adeka Chemical Supply Corp. / Adeka Clean Aid Corp. / Adeka Fine Foods Corp. / Adeka Engineering & Construction Corp. / Oxirane Chemical Corp. / Adeka Foods Sales Corp. / Adeka Logistics Corp. / Yongo Co., Ltd. / Tokyo Environmental Measurement Center Co., Ltd. / Uehara Foods Industry Co., Ltd.  
And, 8 overseas affiliated companies are partially included.

### ■ Reference Guidelines

This report was prepared with reference to the Environmental Reporting Guidelines FY2007 Edition of the Ministry of the Environment and the GRI Guidelines FY2006 Edition.

# Commitment of Our Top Management

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President

Kunihiko Sakurai

櫻井邦彦

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## Toward realizing sound and affluent society

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The ADEKA Group is strongly aware of the importance that companies must work to develop sustainability while aiming to achieve harmony with society as members of society, meet the expectations of their stakeholders, and make proactive contributions to society.

**"Working hard to be a forward-looking organization by staying on the cutting edge"**

**"Being a respected member of the world community"**

Based upon these two management policies, we provide safe, high quality products and services which are suited to the needs of society with the intent of thereby contributing to the realization of a sound and affluent society.

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## Social contribution through core business

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In order to continue to be a company group that is valued by society, the ADEKA Group works to expand our global business. The focus is on our line-up of technically superior products that are competitive in international markets. We will provide valuable products through our core business to contribute to society and bring happiness.

And, I believe that the efforts of all ADEKA group employees working in Japan and overseas to deepen the understanding and awareness of CSR activities will lead to the establishment of favorable relationship with stakeholders surrounding the ADEKA group, so we will continue to proactively deepen the communication, sustainably progress with the society, and aim to become a company trusted by people throughout the world.

In fiscal year 2008, as represented by the inflation of crude oil and resources prices in the first half of the year and worldwide recession triggered by U.S. financial crisis, external environment had been rapidly worsened. Under severe business environment, the ADEKA group will work on the "Structural reform responding to the changes in business environment" as a priority and address the business strategy for getting on the growth track immediately after economic recovery, aiming for sustainable growth. To strengthen our business in the future, I think it is necessary to accelerate the development of "Energy", "Environment", and "Life science" fields that are extensions of our retained technologies. These fields are expected by society and expected to be largely grown, so we will be actively engaged in growing these fields.

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## ADEKA Group CSR Five Year Plan

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The ADEKA, as a member of international society, seeks a sustainable affluent society and the inheritance of global environment to our next generation and also works to develop the products based on basic idea that we, as a manufacturer, never produce, use, and discharge environmental pollutants. Our R&D division will work everyday to proceed with technological development to produce the environment-conscious products useful for society.

Our company group has positioned CSR as the center of our management. We will endeavor to strengthen the corporate governance and compliance, improve and make effective use of the internal control system, and furthermore raise the soundness and transparency of management. And also, we will work in unison to address CSR activities based on "ADEKA Group Five Year Plan for CSR" mainly led by "Expert Committee on CSR Promotion".

# CSR Activities Highlight **2008**

## Acquired integrated management system adaptation (Kashima factory)

Kashima Factory passed Integrated Management System Adaptation test on November 28, 2008.

Kashima Factory acquired certifications of ISO14001, ISO9001, HACCP, and OHSAS18001, and will efficiently operate the Integrated Management System by integrating these certifications into the system. We work to provide high-quality and safe products and operate the factory with environment consideration kept in mind.

## OHSAS18001: Acquired the updated certification in 2007 (Adeka Fine Chemical Taiwan Corp.)

A d e k a F i n e Chemical Taiwan Corp., Our 100% owned subsidiary, took a certification updating test of SGS (ISO accreditation organization in Taiwan) on April 17, 2008, and updated the OHSAS18001 of 1999 year version into the same of 2007 year version.



And, Adeka Fine Chemical Taiwan Corp. passed the certification test of International Standard "BS25999" of Business Continuity Management System (BCMS) on July 12, 2008. It will work as good partner for customers to provide high-quality products and safety, and contribute to the customers' company value improvement activities.

The company acquired the certifications of ISO9001 and ISO14001 in June, 2006 and in February, 2007, respectively.

## New Community Interaction Activities

As new efforts, we started this year to hold "Parent and Child Cookie Making Class" and "Interesting Chemical Experiment Class" for children of elementary schools nearby.

This topic is also introduced in Page 17, so please see that page.



## Acquired IEEJ Academic Promotion Award (IEEJ Technical Development Award)

"Development of 180kVA high-voltage SiC3 phase inverter" Development of 180kVA high-voltage SiC3 phase inverter cooperatively developed by ADEKA and Kansai Electric Power Co., Inc. acquired IEEJ Technical Development Award (one of IEEJ Academic Promotion Award (64th IEEJ Technical Development Awards) from Institute of Electrical Engineers of Japan.

Receiving this award is based on the evaluation that this technology enables you to reduce the discharge of carbon dioxide by low-loss mechanism of electric conversion system, save the resource by downsizing the system, and move the system under high-temperature environment, and thus is expected to largely contribute to the energy-saving and downsizing in various fields including electric, industrial, and railway.



## Developed Environment-Responsive Photo Cationic Polymerization Initiator

Boron Series Onium Salt Photo-Cationic Initiator developed by ADEKA has high security due to non-use of toxic metal, and has high-sensitivity hardenability and temporal stability comparable to conventional ones.

This product can be applied in various precision equipment such as hard coating into optical film and ID card, or bonding the lens of cellular phone and camera, and also has quick drying and delaying properties depending on the intended use, and thus is expected to be applied in various fields including bonding light-emitting devices such as lens, light-emitting diode (LED), and laser diode (LD), and electronic parts such as TAB implementation connector seal (TAB is abbreviation of Tape Automated Bonding). The energy required by this product for hardening being lower than heat hardening, offers you environmental advantage such as reduction of emitted CO<sub>2</sub>.



# ADEKA's Principles and CSR

## Management Vision and CSR

The ADEKA Group's Management Principles

Working hard to be a forward-looking organization  
by staying on the cutting edge

Being a respected member of the world community

With "working hard to be a forward-looking organization by staying on the cutting edge" and "being a respected member of the world community" as our management, the ADEKA Group is accelerating the global expansion of our businesses centering around a line-up of technically superior products that are competitive in international markets. We will continue to contribute to the world through our distinctive, superior technology, focusing on growth sectors and growth regions, and by providing products on the cutting edge of the age as well as those that are environmentally-friendly and suited to our customers' needs.



## CSR 1 Mid-Term Business Plan

Aiming to become a company of consolidated earnings 300 billion yen in the future, our group works to promote "Strengthening the base for the growth corresponding to the changes in the business environment".

We will promote "Six basic philosophies" as the highest priority issue for future, address various measures to enhance the market competitiveness of our products, and endeavor to create new business fields.

### ◎ Slogan

**Strengthening the base for the growth corresponding to the changes in the business environment**

### ◎ Six basic philosophies

- Strengthening and promotion of concentration (selection and concentration) to growing areas
- Building up the technology base corresponding to the changes in the business environment, strengthening R&D capacity, and creating new businesses.
- Carrying out the M&A and alliance strategy in core business and growing business
- Strengthening the governance which is necessary to the global management and promotion of strategy
- Further promotion of oversea businesses
- Fostering/strengthening human resources

## CSR 2 ADEKA Group's CSR Objectives

### ◎ Strengthening the communication with our stakeholders

For responding to the demands of various stakeholders, it is important for all employees in ADEKA group to be aware of themselves as a role of contact with such stakeholders, and actively deepen the communication with them.

What all employees are aware of themselves as a member of ADEKA group and perform respective possible social contributions will help improve the "value for stakeholders", realize the "Maximization of Corporate Value", and we intend to continue on as a business group deemed necessary by society.

### ◎ Business fields to be targeted

We will promote the expansion of existing businesses and the research and development of three fields as the mid- and long-term target field.

1

#### Energy

Solar battery materials, Power semiconductor materials, etc.

2

#### Environment

Soil purification materials, etc.

3

#### Life sciences

Medical care materials, Healthcare materials, etc.

### ◎ Focusing on "Energy", "Environment", and "Life Science"

We will clarify the "World-class technologies" and "Technologies to be more fortified", expand the business areas in strong fields and fields that can be fortified, and devote ourselves to the creation of products useful for society. As for the direction of concrete technological development, we will work to develop competitive products that can contribute to society in the future in the three targeted fields of energy, environment, life sciences, in accordance with a mid-term business policy.

### CSR 3 Stakeholders Surrounding the ADEKA Group

#### ◎ Initiatives and Policies by Stakeholder

While conducting management that gives due consideration to balancing the interests of various different stakeholders, the

ADEKA Group intends to continue on as a company deemed necessary by society by persisting with sustainable growth.

	Demands from stakeholders	The ADEKA group's initiatives and policies	Corresponding pages
Customers and consumers	Providing high quality products and services, product safety, disclosing information	<ul style="list-style-type: none"> <li>● Develop and provide high quality, safe products suited to our customers' needs.</li> <li>● Providing accurate information related to our products.</li> <li>● Promptly dealing with product complaints and customers' demands.</li> </ul>	13~14
Business partners	Fair trade, equal business opportunities, and coexistence and co-prosperity	<ul style="list-style-type: none"> <li>● We provide all of our business partners with equal business opportunities, and select said partners by means of appointment through objective, fair, and economically rational standards.</li> <li>● Among our business supply chains, we aim for coexistence and co-prosperity with our business partners as partners that have common objectives.</li> </ul>	19
Shareholders and investors	Returns to shareholders, timely disclosures of information, corporate governance	<ul style="list-style-type: none"> <li>● We provide accurate business reports to shareholders and return profits in an appropriate manner.</li> <li>● Raising the transparency of management and ensuring the confidence of investors through timely and appropriate disclosures of information.</li> <li>● Raising the confidence of financial reporting by strengthening internal control systems.</li> <li>● Strengthening governance in order to raise the quality of company management and the propriety of services.</li> </ul>	20
Employees and executives	A safe workplace environment and appropriate treatment, remuneration, and self-actualization	<ul style="list-style-type: none"> <li>● Creating a comfortable workplace environment that takes the health and safety of employees into account.</li> <li>● Conducting evaluations and determine proper treatment and remuneration based on a fair and transparent personnel system.</li> <li>● Using objective management systems and education and training systems to increase employees' abilities and morals, thereby leading to their self-actualization.</li> </ul>	15~16
Local and international community	Tax payments, contributions to society, welfare, regional exchange, dialogue, and the safety of factory operations	<ul style="list-style-type: none"> <li>● We return benefits to society through tax payments, contributions to society, and welfare activities while aiming for management that is open to society and increasing transparency through regional exchange and dialogue.</li> <li>● We strive for safe, accident-free factory operations.</li> </ul>	17~18
Government	Compliance with laws and ordinances	<ul style="list-style-type: none"> <li>● Strengthening internal control systems, including compliance structures and risk management.</li> <li>● The ADEKA Group has traditionally worked toward thorough compliance, which includes cooperative companies and business clients.</li> </ul>	9~10
Environment	Preserving the earth's environment	<ul style="list-style-type: none"> <li>● We develop products that are easy on the earth's environment at each stage of manufacturing, usage, and disposal.</li> <li>● We strive to conserve energy and natural resources and reduce waste through the operation of our factories, as well as at our offices.</li> <li>● We strive for environmental considerations in cooperation with our suppliers.</li> </ul>	21~34

Improvement of the values for stakeholders

Maximization of "Corporate Value"  
Becoming business group that is valued by society (stakeholders)

## CSR 4 ADEKA Group CSR

### ◎ Basic Philosophy

The ADEKA Group positions CSR as the core of our management and aims to contribute to society on the basis of our main business under the watchwords of "gentle harmony between people and technology" and "Harmony with society."

#### ■ "Gentle Harmony between People and Technology"

Developing and providing safe, high quality products which are environmentally friendly and meet our customers' needs through our proprietary, exceptional technology-in other words, devotion to our core business as a manufacturer-is the foundation of CSR, and we consider it to be the first step.

#### ■ "Harmony with Society"

We will continue to aspire toward highly transparent management that is open to society by not only observing laws and ordinances, but also through the timely and proper disclosure of information and friendly, proactive communication with stakeholders.



And, we will work on social contribution activities and environmental conservation activities in our business areas to seek the harmony with society and coexistence with the environment.

The ADEKA Group seeks sound, sustainable development which takes the interests of various different stakeholders into consideration and pursues CSR on the three fronts (triple bottom line) of society, the environment, and the economy.

## CSR 5 CSR Promotion Structure

The ADEKA group will work for strengthening the corporate governance, building up the risk management system, promoting the compliance, and addressing the environmental conservation and quality safety, to achieve corporate social responsibility, respond to the expectation of our stakeholders, and promote the CSR activities.

To carry out CSR activities through our core business, the Expert Committee on CSR Promotion set up in February 2007, being comprised members from major divisions, works to grasp the current status, extract challenges, and perform examinations on future measures.

Based on "ADEKA Group's CSR Five Year Plan" of CSR mid- and long-term objectives created by the Expert Committee on CSR Promotion, we asked third party for the opinion to improve our CSR activities according to FY2008 objectives "Verification and Evaluation of CSR Activities". And, we started "CSR seminars for employees by employees" to encourage all our employees to deepen their knowledge of CSR (Corporate Social Responsibility).

### ADEKA Group's Five Year Plan for CSR

FY2007	Dissemination	Grasping the current status of CSR activities, orientation of initiatives, permeating it among employees and raising their awareness
FY2008	Verification	Verifying and evaluating CSR activities
FY2009	Planning	Enacting CSR principles
FY2010	Implementation	Implementation of unified CSR activities by the ADEKA Group (in Japan)
FY2011	Continuation	Expanding out to global activities (overseas affiliate companies)



CSR seminar

**CSR 6 Corporate Governance**

The ADEKA Group recognizes that strengthening corporate governance is a managerial issue of top priority. Based on the corporate governance by decision making of Board of Directors by mutual consent system and specific auditor system, we will add our original improvement and actively work for improving and strengthening our management system furthermore.

Specifically, we have introduced Operating Officer System to expedite the managerial decision making and clarify the roles (responsibility and authority) for the execution of business, and worked for optimizing the number of directors and shortening their terms in the aim of further improving operating efficiency.

**◎ Establishment of the Internal Inspection Branch**

The Internal Inspection Branch was established in July 2005 on an independent footing from the management organization and under the direct control of the President. It was created in order to strengthen the functions for carrying out internal auditing from the perspective of the legality and propriety of the execution of business by every division.

**◎ Strengthening the Internal Control System**

The Internal Control Promotion Committee was established in March 2007, under the direct control of the President. We work to strengthen the internal control system based on the principle of the Internal control System.

**◎ Running of Open General Shareholders' Meetings**

Our company emphasizes dialogue with all of our stockholders, and aims for the running of open General Shareholders' Meetings in order to reflect their opinions in our management. Since 2000 we have been striving for the early holding of regular General Shareholders' Meetings, utilizing visual presentation method there, and running IR-conscious General Shareholders' Meetings.

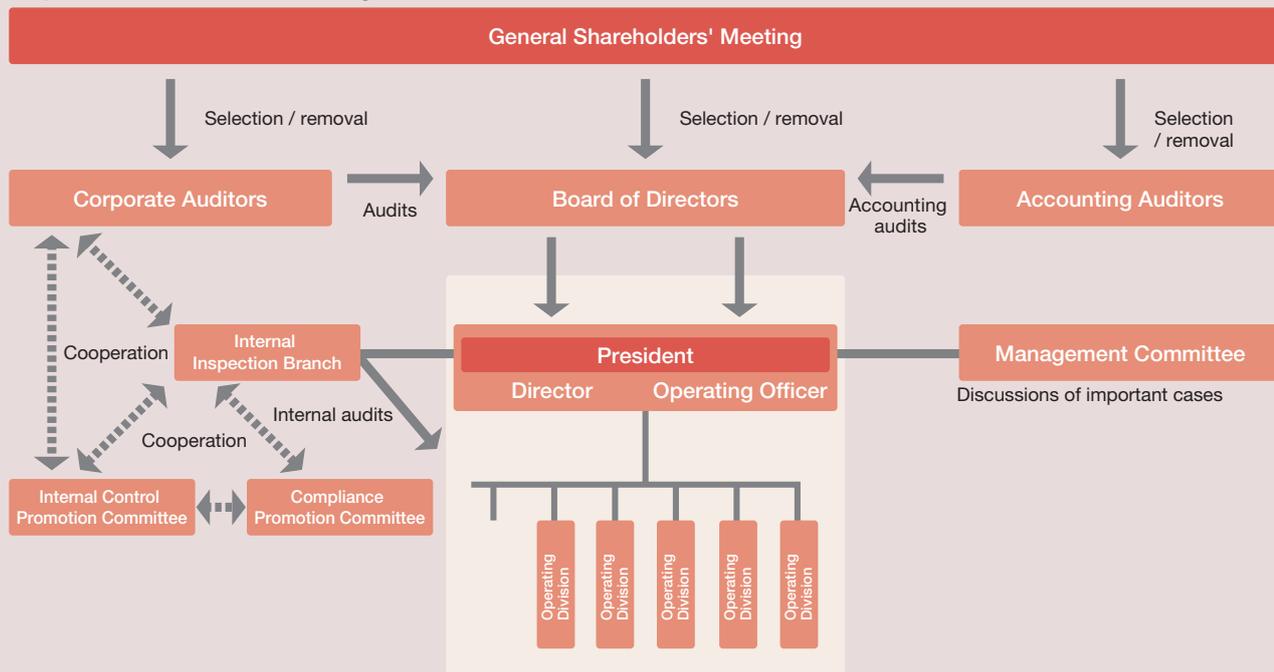
**◎ Establishment of the Independent Committee**

Our company established the Independent Committee in June 2007 as an institute for checking on management from an independent footing in order to raise our corporate value and ensure gains jointly with shareholders. The Independent Committee is comprised of highly independent external experts and external officers. The committee is convened when a large-scale purchaser of company stock emerges in order to ensure transparency and objectivity in the response procedures taken by our company.

Based on information provided by the large-scale purchaser, the Independent Committee conducts examinations on an objective and fair footing from the perspective of whether or not the purchase would contribute to our company's corporate value and joint gains with our shareholders. It then provides counsel on the matters like responses to the purchase proposal to our company's Board of Directors. The role of the Independent Committee is to set in place an environment in which appropriate decisions can be made by means of disclosing information in the form of opinions from a fair standpoint to shareholders.

Our company holds the Independent Committee twice a year.

Corporate Governance Structure Figure



## CSR 7 Risk Management Structure

### ◎ Risk Management Committee

The Risk Management Officer serves as the head of the Risk Management Committee, which uses the Legal Affairs & Publicity Department as its secretariat. The committee is comprised of heads from major staff divisions as its members, and creates the risk management system, drafts the risk management manual, and conducts reviews of the risk management system.

In 2008, we have reevaluated all possible risks through performing company-wide questionnaire, decided the themes to be challenged (earthquake and pandemic) based on the result of the reevaluation, and started activities of Earthquake Disaster Countermeasures Workgroup and Pandemic Workgroup.

### ◎ Risk Management Manual

The Risk Management Manual is established with the objective of minimizing damage by rapid and optimal measures in case of an emergency.

### ◎ Emergency Headquarters

The Emergency Headquarters will be established under the directors of the department in charge for cases with a particularly high degree of emergency and importance regarding the following 14 categories. Organizational measures will be taken in accordance with the Risk Management Manual.

- ① Accident / disaster
- ② Environment / pollution related matters
- ③ Transportation accident
- ④ Failure of host computer
- ⑤ Product related matters
- ⑥ Confidential data leak
- ⑦ Disrepute
- ⑧ Filing of suit
- ⑨ Crime against the corporation
- ⑩ Serious crime against executives / employees
- ⑪ Accident during business and related activities
- ⑫ Credit alarm
- ⑬ Overseas natural disaster and political instability, etc.
- ⑭ Pandemic (Spreading of infectious diseases)

### ◎ Complying with the Personal Information Protection Law

The Information Management Panel was established as a subordinate body within the Compliance Promotion Committee in order to comply with the Personal Information Protection Law, which was entered into full force on April 1, 2005, and in the aim of strengthening safety management measures. In the same year we also formulated and released our Personal Information Protection Policy and newly established and revised several internal regulations related to the protection of personal information, such as the Regulations on the Management and Protection of Personal Information.

For the future we will continue to provide education for our employees and total management in terms of facilities and technology, while further moving forward with strengthening our responses to information security.

### ◎ Facilities Upgrade Plan

The deterioration of facilities is believed to carry considerable weight as a primary factor in the occurrence of major accidents and disasters.

Since 1999 our company has formulated and implemented "Map for Upgrading Deteriorated Facilities" which lists up upgrade investment cases.

In FY2008 we upgraded the extra high tension sub station at our Mie Factory, the electrolytic facilities at our Fuji Factory, and process control computers at our Sohma Factory, and then progressed the upgrading up to 63% in total.

In FY2009 we will upgrade the control system and heat exchanging system at our Kashima Factory, heat carrier unit at our Chiba Factory, and industrial waste incinerator at our Mie Factory, and expect to progress the upgrading by 3% when compared with FY2008.

However, the number of upgrade investment cases will be reviewed in FY2009 and is scheduled to be increased by about 13% when compared with FY2008, so the progressing rate will become 58%.



Upgrading of equipment for filling polymer additive (Mie Factory)

**CSR 8 Compliance Structure**

**◎ Code of Ethics and Action Guidelines**

**■ ADEKA Group's Code of Conduct**

This is an action guideline that sets down basic items, in order for the executives and employees of the ADEKA Group to act properly based upon things like the ADEKA Group's

management principle, corporate ethics, and laws and ordinances, and is comprised of the eight articles.

- ① Foster corporate transparency by truthfully and accurately disclosing information regarding our business activities
- ② Provide safe and high quality products and services
- ③ Be serious about preserving the environment
- ④ Open and Friendly communication and activities, to serve the interest of society and to maintain its trust
- ⑤ Abide by laws and regulations in all corporate activities and conduct fair business in an ethical manner
- ⑥ Maintain a safe and healthy working environment for our employees
- ⑦ Not tolerate anti-social forces or behavior
- ⑧ Strive to achieve sustainable growth and success for the benefit of our employees, shareholders and society

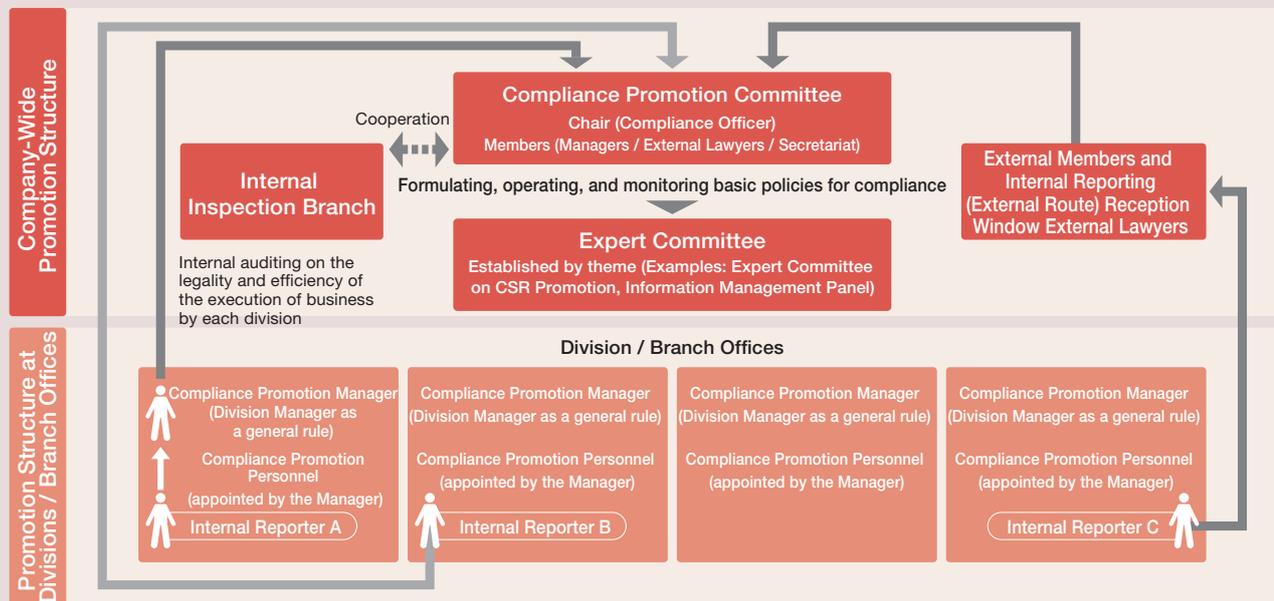


Action Charter, Action Guidelines, and Case Book

**◎ Compliance Promotion Structure**

We have been working to strengthen compliance and its internal control system by establishing a company-wide promotion structure led by the Compliance Promotion Committee and in cooperation with the Operational Auditing Branch (established July 2005) and the International Control Promotion Committee (established March 2007). Furthermore, by introducing an internal reporting system with three routes

we are working to detect compliance violations in advance. In October 2008, to get the public informed of the improvement details, we have distributed the booklet "ADEKA Hotline Compliance Consultation and Reporting System" to all ADEKA offices and member companies of Group Compliance Association, improved the contact window for consultation and reporting, and implemented the orientation and hearing.



\*In order to ensure thorough compliance throughout the ADEKA Group as a whole, a group compliance conference is held regularly and communications and information related to compliance is exchanged.

**◎ Providing Compliance Education and Training**

■ "Compliance Action Guideline" that sets out various items for the executives and employees to observe in actual work operation by relationship with stakeholders, and "Case Book" that introduces various cases of practical law violations and scandals and is used for case study in workplace, are created to help our compliance education and training.

■ To promote the education and training, we conduct rank-based trainings for new employees and new executives, trainings according to laws and themes, and trainings for compliance leader who becomes key person for compliance promotion in respective workplaces. And, we broaden the base of training and education and introduced compliance e-learning targeted for all executives and employees, to encourage them to be aware of the compliance consciousness.

\* topics \*

# Best Partner for Taste and Safety



In food business, securing the safety becomes globally common issue in addition to the taste. The ADEKA puts up the food business brand slogan "The Delicious Taste You Can Rely On" and endeavor to supply tasty and safe foods under stringent quality control and food safety compliance system. Here, we will introduce new products developed by ADEKA under the themes of "Taste", "Safe", and "Health".

## Bakery and Confectionery Margarine

### Aromarde Series

**Flavor of butter and milk, and taste ingredient are properly blended.**

#### Margarine superior in flavor and taste

"Aromarde Series" released as new product in 2008 is a kneading-type margarine characterized by rich flavor and taste that you can feel in fresh-baked bread and snacks.

In our general consumer survey, we asked 100 consumers to eat and compare "Aromarde"-kneaded bread and "butter"-kneaded bread, and then 59% of them answered that "Aromarde"-kneaded bread was tastier.

This product is highly evaluated in market and enjoyed by many users, and is also increasingly employed this year.

#### Emulsifier additive-free and low trans-fatty acid design that makes you safe

While general margarine products tend to use food emulsifier, the "Aromarde" series never use such emulsifier due to manufacturing technique and application of nanocrystal fat technology.

Trans-fatty acids" contained in beef, dairy products, margarine, shortening, etc., are known to increase harmful cholesterol and decrease beneficial cholesterol in the human body. Intake of trans-fatty acids can increase the risk of developing coronary heart disease. We have endeavored to address the research & development toward reducing trans-fatty acid and establish the production technology, early developed specific margarine like "Aromarde" series and shortening utilizing low trans-fatty acid design, and now provide safe foods to our consumers.



Product package



"Aromarde"-used bread



## High-purity $\beta$ glucan

# Barley $\beta$ glucan and fermented $\beta$ glucan

We succeeded commercialization of two type  $\beta$  glucans.

### New healthy ingredient $\beta$ glucan

$\beta$  glucan is widely distributed in nature like plant, mushroom, and microorganisms, and thus is naturally eaten by people since olden times. This ingredient is expected various physiologies and is studied in various fields such as medical, pharmaceutical, immunology, biology, and botany.

We have so far studied allergy and immunology, and focused attention since early on  $\beta$  glucan utilizing specific technologies accumulated in food processing and biotechnology.



Line of products sold by us on the Web

### Responding to health needs

ADEKA has succeeded in the commercialization of two types of "Barely  $\beta$  glucan" extracted from barely (Oomugi) and "Fermented  $\beta$  glucan" produced by fermenting black yeast (microorganism). These products are highly-functional products developed utilizing biotechnology, and are suitable for ingredients of foods and cosmetic products. Thus, these products respond to healthy needs. As a way of informing superior effect of  $\beta$  glucan to public, we have opened a virtual laboratory " $\beta$  glucan Laboratory" on the Web. "Barely  $\beta$  glucan Laboratory" and "Black Yeast  $\beta$  glucan Laboratory" helps you easily understand the study results through Q&A corner, and serves to spread the  $\beta$  glucan.



Barely granule easy to swallow



Tasty green juice



Black vinegar drink



Plum taste jelly

Barely  $\beta$  glucan Laboratory  
<http://www.mugi-lab.info/>  
This site is available only in Japanese.

Aureobasidium pullulans  $\beta$  glucan Laboratory  
<http://www.black-yeast.info/>



# Social Reports



To continue to be a company that continues to develop and grow, the ADEKA group will fortify the compliance management, and aggressively execute various measures such as providing safe and high quality products and services, disclosing the information appropriately, returning the profits to shareholders, regional exchange, and securing the human rights, safety, and employment of the employees, to respond to social expectation.

In order to respond to the various demands of our stakeholders, we consider each and every one of our employees to be contact points with the community and strive to foster human resources under the basic principle of "developing reliable people".

**Akira Momose**, Director and Operating Officer, Human Resources Department, General Manager of Purchasing & Distribution Department, Chairman of Compliance Promotion Committee

**Haruhiko Tomiyasu**, Director and Operating Officer, Legal Affairs & Publicity Department and Finance & Accounting Department, Chairman of Internal Control Promotion Committee

## Engagement with Our Customers

### 1. Quality Management and Assurance Structure

To realize product quality that meets customer demands and which can be used safely, we are moving forward with the establishment of a company-wide quality assurance system and the creation of structures that would allow us to provide services such as product information.

#### ■ Quality Management and Assurance Structure

Our company has established the Quality Management / PL Council<sup>\*1</sup> as a company-wide organization, as well as Quality Management Committees in the factories based upon ISO 9001<sup>\*2</sup>, ISO 22000<sup>\*3</sup>, and HACCP<sup>\*4</sup>. This was implemented to set in place a structure in which products could be supplied safely and securely (see P. 30 regarding the certification acquisition status).



<sup>\*1</sup> The Quality Management / PL Council is held once each year with the objectives of: ① upgrading quality management and confirming quality assurance, and ② carrying out business in a continuous and effective manner in accordance with the basic policies for Product Liability (PL). It also sets the policy for the year and conducts confirmations of the annual PDCA.

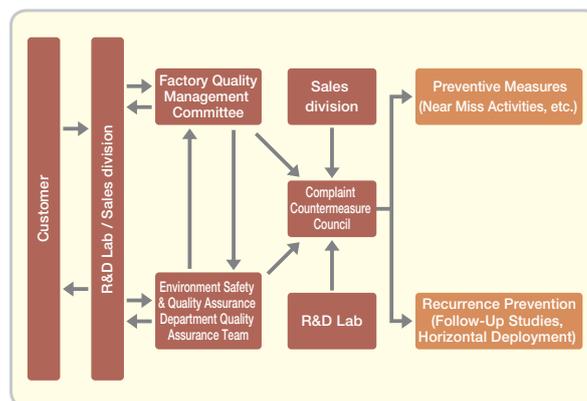
<sup>\*2</sup> ISO 9001: These are international standards for quality management systems, which were enacted in 1987 by the International Organization for Standardization.

<sup>\*3</sup> ISO 22000: This is a quality management system exclusive to foods, which conducts concrete management of HACCP using methods from ISO 9001.

<sup>\*4</sup> Hazard Analysis and Critical Control Point (HACCP): This is a sanitary management method for foods.

#### ■ Responding to Complaints

Complaint coping measures were established, such as immediate reporting rules and a structure to ensure immediate responses. When a product quality related complaint is filed by a customer with the Sales Division or R&D Labs, it is immediately reported to the Factory Quality Management Committee and Environmental Protection / Quality Assurance Department.



Moreover, company-wide Complaint Countermeasure Councils are held twice a year. In addition, the Factory Quality Management Committees at each factory promote activities to eradicate claims, such as strengthening prevention, thoroughly ensuring recurrence prevention measures, and conducting horizontal deployment.

#### ■ PL Measures

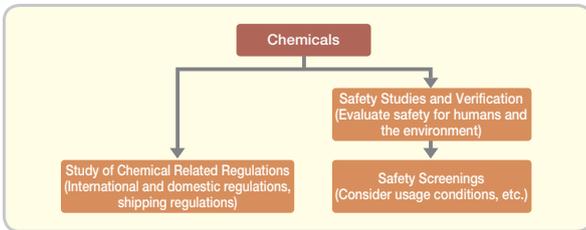
In FY2008, concerning document management in the Food division of Osaka branch, we conducted Product Liability (PL) audits on 3 posts and confirmed that awareness had spread. Furthermore, legal briefings and study groups directly related to PL were held 14 times about 18 themes.

## 2. Product Safety

We work hard to assure our product safety under the principle that "ADEKA products shall contribute to the development of society, while contributing to human health and environmental protection."

### ■ Chemical Product Safety

In order to assess and determine chemical product safety and reduce risks, we examine chemical product safety and comply with the relevant international and domestic regulations. Various safety examinations of newly introduced chemical substances for new products are carried out in accordance with the Law Concerning the Examination and Regulation of Manufacture, etc. of Chemical Substances (Chemical Examination Law), with various safety trials performed based on the Industrial Safety and Health Law.



### ■ Food Product Safety

We have formulated basic principles and internal structures related to food product safety, and have also erected a system that upholds safety from ingredients to products.

#### 1. Food Safety Basic Principles

Under the sub-brand slogan of "The Delicious Taste You Can Rely On" we promote business activities which place emphasis on the perspectives of each of our consumers and users. We strive to provide foods which take food sanitation and the environment into account and that can be eaten safely and deliciously.



#### 2. Internal Structure related to Food Safety

In addition to the Food Sanitation Management Committee, the Quality Management / PL Council and Compliant Countermeasures Council operate organically so as to further improve the level of quality management. In order to comply with revisions of related laws and regulations, or to meet the needs of the times, we work to revise food-related standards and strengthen the management (system).

#### 3. Safety from Ingredients to Products

We established a computer management system which is designed to improve the efficiency of product information management and the issuance of written product standards.



### ■ Proper Product Information Disclosures and Quality Labeling

Proper disclosures and quality labeling is performed with regard to chemical and food product information via the following initiatives.

#### 1. Chemicals

ADEKA provides information on all chemical products which includes hazard and toxicity via product safety data sheets (MSDS<sup>\*1</sup>), product labeling, and technical documents in order to minimize the health impacts from handling said chemicals on consumers and workers and environmental impacts. In addition, we are moving forward with compliance for GHS<sup>\*2</sup>.

Means of Providing Information	Listed Contents
MSDS	Information such as international and domestic regulations, shipping regulations, and safety Domestic products: Approximately 3,200 (JIS Z7250 form) Exported products: Approximately 1,800 (abide by the regulations at the export destination)
Product Labels (International and Domestic Labels) and Export Indicators	Regulations, guidelines, international rules, and PL information Products subject to the Industrial Safety and Health Law handled through JIS Z7251
Packaging Yellow Card	Guide number, UN number, and emergency contact information affixed to the product label
Products catalogue	Information such as the product's representative aspects, properties, and optimal usage methods

<sup>\*1</sup> **Material Safety Data Sheets (MSDS):** Sheets that contain information like chemical information such as the name, properties, harm and toxicity, and cautions when handling.

<sup>\*2</sup> **Globally Harmonized System of classification and labeling of chemicals (GHS):** System that standardized various chemical classifications which used to differ in various countries and harmonized indicators (illustrations and warning language).

#### 2. Food

Our strict quality management ensures "food safety and reliability." Products are labeled in accordance with three pieces of legislation on basic information for products (Food Sanitation Law, JAS Law (Law Concerning Standardization and Proper Labeling of Agricultural and Forestry Products), and Law for Preventing Unjustifiable Extra or Unexpected Benefit and Misleading Representation). More detailed product information is provided for individual customers in the form of "written product standards." Detailed information is provided for sales division members through training using technical information materials such as sales manuals.

Means of Providing Information	Listed Contents
Products Labeling	Basic information in accordance with legislation, such as expiration date, storage methods, allergy information, and the producer.
Written Product Standards	In addition to Product Labeling, more detailed information such as quality standards, sanitary standards, material mix, and nutritional analysis examples, etc.
Products Catalogue / Technical Services	Optimal usage of the product, examples of how the products are used, and other information is listed

### ■ Recall of "Microwave-Heated Hot Water Bottles"

With regard to "Microwave-Heated Hot Water Bottles", we had discontinued in December 1998, we have so far recalled the products. However, as of the present uncollected products still remain, and unfortunately new accidents of burning the users occurred in FY2008 again.

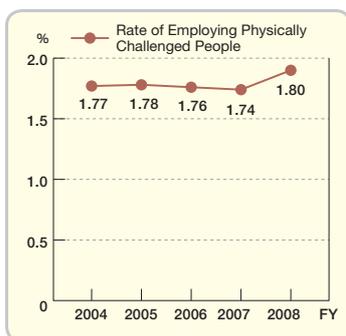
We apologize you again for the troubles caused by our defective products, and we will make every effort to recall all of the products. We will endeavor to improve our product quality and furthermore expend all possible means to prevent such product accidents from occurring.

# Engagement with Employees

## 1. Human Rights and Equal Opportunity

### ■ Employment of Physically Challenged People

ADEKA acknowledges that creating an environment where physically challenged people can live and work independently is a part of corporate social responsibility, and thus aims to expand the employment of physically challenged people. For FY2008 our ratio of physically challenged employees was 1.80%, which is the legally designated ratio. In addition, we are also promoting the conversion to barrier-free facilities and striving to provide workplaces and outfit environments in which people with physical disabilities can move around with ease.



Trend in the ratio of physically challenged employees

### ■ Child Care Leave System

We have set up a system to support child care which allows those human resources with the ambition and capacity to balance their family and work lives. The number of people actually making use of this system in FY2008 came to seven. In addition, two male employees made use of this system. In addition to our child care system, we have also adopted a flex-time system in order to allow parents to continue with child care and nursing care for children after they return to work.

#### 1. Family Care Leave System

We have established a support system designed for family nursing care, such as for the parents of the employee themselves or of their spouse.

In addition, we have set up leave in which unused yearly paid leave can be accumulated and used for the sake of one's family while receiving pay.

#### 2. Nursing Care Leave for Children

Employees raising children that have not yet entered elementary school are able to take special leave limited to five days per year in order to care for said children in the event that they are injured or become ill.

#### 3. Refreshment Leave System

Employees that have attained a certain level of continuous service are allowed to take eight consecutive days of leave. This is intended to refresh both mind and body and to enable the employees to exercise improved diligence in their duties.

#### 4. Volunteer Leave System

We support employees' volunteer activities conducted as members of the region and community. Employees can take up to seven days of special leave when they participate in various voluntary activities, such as emergency relief, cultural interaction, social welfare, and environmental protection.

### ■ Fringe Benefits

ADEKA has concluded agreements with the following facilities offering fringe benefits with the goal of promoting the health of our employees and their families and refreshing them in both body and mind.

**Number of Users in FY2008** Figures in ( ) are the results from the previous fiscal year

Central Sports Club	549 (561)
Laforet Club	516 (465)
C'est la vie Resort Izumigo	267 (261)

In addition, we offer various types of recreation which our employees take part in.



Soft ball game



Relay race commemorating ADEKA's founding

## 2. Developing and Utilizing Human Resources

### ■ Our Philosophy for Developing Human Resources is "Trust and Innovation"

Based upon the fundamental reasoning that human resources are "human capital," since 2007 we have set out to enhance the fostering of human resources drastically. Our company promotes various measures for this, such as installing the Human Capital Development Group as a special post in May 2007, and establishing "Trust and Innovation" as our company's philosophy for developing human resources.

"Trust" refers to the merit of a "trustworthy ADEKA" that our company has continued to uphold since our founding and which we will continue to instill in each and every one of our employees as part of our unique and unchanging corporate culture. "Innovation" refers to not only responding to the changing times, but also continuing to develop the people (innovators) who serve as the source for our own transformations in order



for our company to be a world leader in promptly creating original, high value-added products.

**Philosophy for Developing Human Resources**

■ Measures for Developing Human Resources

We are promoting the following measures on the basis of our philosophy for developing human resources of "Trust and Innovation."

1. Measures to "Develop Trustworthy People"

Self Leadership Training is conducted by internal instructors through stratified training. Moreover, we are also promoting initiatives like volunteer clean-up activities in the areas surrounding offices and are aiming to achieve a "service-oriented mindset".



Training for new Assistant Manager



Clean-up activities in the area surrounding offices

2. Measures to "Develop Innovation Leaders"

We continued an Overseas Training System (for six months) with the goal of fostering "global organization human resources." And we launched discussion-based selection training "ADEKA Mirai-Juku (Future Class)" with the goal of early fostering next-generation leaders.



ADEKA Mirai-Juku (Future Class)

■ Reemployment System for People 60 or Older

Since July 1, 2006 we have instituted a new reemployment system which generally targets anyone who desires to be reemployed. This was done from not only the perspective of carrying out corporate social responsibility, but also in the interest of having the elderly pass down their skills and knowledge to future generations and ensuring capable human resources. Centering on persons who are sound in both mind and body, have an excellent work attitude, and can contribute to passing on skills and knowledge, the system allows people to continue with employment up until they have attained the age at which payments of the basic portion of their welfare pensions begin at the outset.

■ Labor and Management Counseling Center

In 2001 we established the Labor and Management Counseling Center and Counseling Office in order to put in place a structure in which all employees could easily and candidly discuss various personnel-related problems.

3. Employee Safety and Health Management

We promote activities in unison with group companies based around the mainstay of ensuring the "Four Safety Activities," namely safety with regard to quality, the environment, the workplace, and our facilities



Yoga course



Evacuation drill in Ogu R&D laboratory

■ Employee Health Management

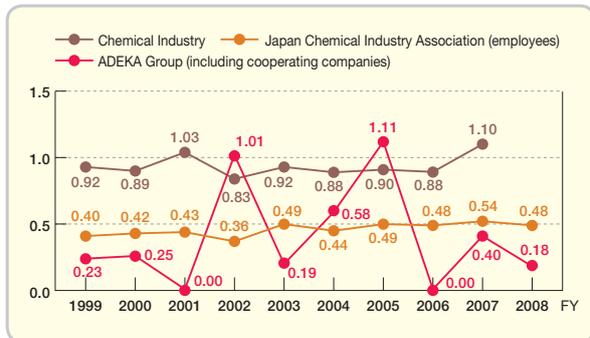
Regular physical examinations are held twice a year. Detailed health assistance is given to employees whose overtime exceeds certain levels, such as through advice from and interviews with employment medical advisors and completing a self check-up list, for example.

■ Mental Healthcare (Establishment of a Health Counseling Counter)

The Health Counseling Counter was established with regular working hours in our Health Management Division and adopts a structure whereby employees can receive advice from employment medical advisors any time.

■ Trends in Accidents Accompanied by Leave

In FY2008 this accounted for 0.18% of the amount of all leave (0.40% the previous fiscal year). We will aim to eradicate industrial accidents and continue to fortify safety measures.



Frequency of the occurrence of workplace accidents

"Four Safety Activities" Improvement Case Presentation

This year 16 teams including 2 overseas group companies were invited to take part in our fifth "Four Safety Activities" Improvement Case Presentation. Hereafter we will seek to further globalize this presentation and improve the technology of "Four Safety Activities" for respective offices.



## Engagement with Society

### Activities that Contribute to Society

#### ■ Community Interaction

We engage in the following activities in an effort to deepen interaction with people in the community. We deepened our interaction with people in the communities of respective ADEKA offices.

#### Opening of Parent-and-Child Cookie Making Class and Interesting Chemical Experiment Class

In FY2008, as a new regional exchange activity, we invited nearby elementary school pupils and their parents to open a "Parent-and-Child Cookie Making Class", and rented a science room of the elementary school to open an "Interesting Chemical Experiment Class". We will continue this activity in order to further encourage the curiosity of the next generation of children.



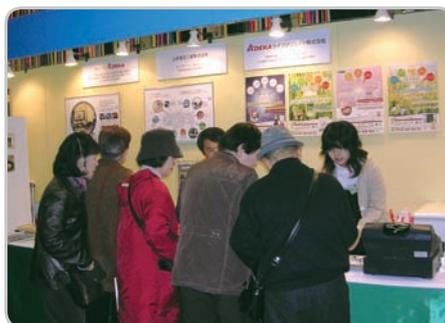
Parent-and-Child Cookie Making Class



Interesting Chemical Experiment Class

#### Exhibitions in Community Industrial and Commercial Festivals

Our offices and factories participate in industrial and commercial festivals conducted by local communities, which serve to deepen the interaction with people from the community.



Industrial festival Ogu district



Industrial festival Kashima factory

#### ■ Measures to Improve Smoking Manners and Promote Environmental Beautification

We conduct initiatives calling for bans on smoking while walking and littering.

##### "Portable Ash Trays with the ADEKA Logo Affixed"

Our Headquarters in the Ogu District has created portable ash trays with the ADEKA logo affixed and distributes them to visitors and people in the community with the goal of improving smoking manners and promoting environmental beautification.



Portable Ash Trays with the ADEKA Logo Affixed

## ■ Social Welfare

### Donation Support Activities

For the victims of the May 2008 earthquake in Sichuan, China and victims of the cyclone disaster in Myanmar, we collected monetary donations from our ADEKA group employees and ADEKA group companies and donated through Japanese Red Cross Society 1,466,428 yen in total to the victims of both disasters.

In addition, a huge earthquake occurred in Iwate and Miyagi prefectures in June. To support the restoration effort we donated through the Japanese Red Cross Society 1,100,000 yen in total to the victims of the disaster.

### Holding ADEKA Music Salon

The "ADEKA Music Salon" was held to invite physically challenged people living in Arakawa-ku to our headquarters, where they were cordially entertained with live music and tea. This event was made possible through the joint cooperation of management and labor. The lecture "Spirit and Behavior in Tea Ceremony" was delivered by an ADEKA retiree and was followed with live music performed by students from Tokyo University of the Arts.



ADEKA Music Salon

In addition, our Kashima factory employees participated in "Nice Heart Festival" held as cultural festival for physically challenged people. Our Fuji factory held a Traveling Mochi Pounding Convention as one of our volunteer activities, and our headquarters and Ogu district office employees participated in "Interactive Bowling Classes" annually held through the joint sponsorship of the Ueno Ward Electric Power Association and Tokyo Electric Power Company's Ueno branch office.



Mochi Pounding Convention

## ■ Sports Promotion and the Sound Nurturing of Youths

The Arakawa Ward Police Offices' Youth Judo and Kendo Competition, which began in 2000, was held for the ninth time.

### Arakawa Ward Police Offices' Youth Judo and Kendo Competition (ADEKA Cup)

The martial arts competitions were held for ninth time aiming at raising healthy boys and girls living in Arakawa-ku and preventing delinquency through martial arts competitions.

149 children participated in the competitions and had a very exciting time there.



ADEKA Cup (Judo)



ADEKA Cup (Kendo)

## ■ Major Industry Groups to which We Belong and Their Activities

We mainly belong to the following industry groups, which carry out a variety of activities.

### Major Industry Groups to which We Belong

- Nippon Keidanren
- Japan Soap and Detergent Association
- Japan Margarine Industry Association\*
- Japan Soda Industry Association
- Japan Chemical Industry Association

\* In May 2007, our president Sakurai became chairman of Japan Margarine Industry Association. There are numerous challenges which industry associations must take up, and we will work with each of their members to further expand said industry associations.

# Engagement with Our Business Partners

## ■ Procurement Policy, Fair Trade, and Related Measures

We provide all of our business partners with equal business opportunities, and select said partners by means of appointment through objective, fair, and economically rational standards. Among our business supply chains, we aim for coexistence and co-prosperity with our business partners as partners that have common objectives.

### 1. Procurement Policy

In order to procure the raw materials and ingredients which conform to the quality demanded, we select our business partners and conduct procurement on the basis of the following items.

- ① Excellent technical ability and superior quality must be ensured
- ② A stable supply must be ensured
- ③ Compliance must be established

### 2. Fair Trade

Under the general principle of fairness we provide equal business opportunities and conduct examinations from corporate information, analysis tables, samples, and similar data. We then set terms and conditions in accordance with our buying criteria.

### 3. Coexistence and Prosperity

We conduct transactions at reasonable prices and build ongoing business relationships for the mutual development of both the buyer and the seller on the premise of carrying on with business relationships that are based on reciprocal trust.

### 1. Specified Agent Meetings

In FY2008 meetings for chemical specified agents were held on April 23rd and 24th, while those for food specified agents were held on September 3rd. Explanations from top management of business objectives for the fiscal year were among the activities carried out at these meetings.

### 2. New Food Product Presentations

The RISU BRAND New Product Presentation is held every year in April in order to meet the sales persons at specified agents. In April 2008, detailed explanations of sales policies and new products were conducted, tasting events were held for breads, sweets, and other trial products that are actually being used, and a lecture by a bread-specific food coordinator was delivered.

### 3. Risu University

Skills and lecture workshops on topics like baking and confectionaries are held each year targeting specified agent sales persons in the Foods Division. These activities aim to increase awareness of ADEKA's products and strengthen the presentation abilities of the salesmen toward consumers.

## ■ Exhibitions

In Japan, we have participated in Finetech Japan<sup>\*1</sup>, the JPCA Show<sup>\*2</sup>, and SEMICON JAPAN<sup>\*3</sup>, and overseas we have exhibited at SEMICON WEST<sup>\*4</sup> in the United States and Chinaplas<sup>\*5</sup>, ChinaCoat<sup>\*6</sup>, World of Concrete<sup>\*7</sup>, and Plastindia<sup>\*8</sup> in China to conduct PR for our products.

## ■ Communication with Specified Agents and Users

We hold meetings for chemical specified agents and food specified agents once a year in order to make each of our specified agents aware of matters like our company's management principles and the principles of each of our sales divisions, new products, priority products, and so on.



RISU BRAND  
New Product  
Presentations



Food Specified  
Agents



FINETECH Japan



JPCA Show

- \*1 FINETECH Japan: The display industry's largest exhibition
- \*2 JPCA Show: The largest electronic circuit industry exhibition in Japan
- \*3 SEMICON JAPAN: The world's largest international exhibition related to semiconductor manufacturing equipment and materials
- \*4 SEMICON WEST: An international exhibition related to semiconductor manufacturing equipment and materials
- \*5 Chinaplas: The most authoritative exhibition related to the plastics industry in China
- \*6 China Coat: One of the greatest exhibitions related to coating, printing ink, and adhesive
- \*7 World of Concrete: The largest concrete exhibition in the world
- \*8 Plastindia: The largest plastic exhibition in Asia-Pacific region

# Engagement with Shareholders and Investors

## Dividend Policy and Status

We will return profits to our shareholders appropriately and take into account various factors including the business environment, performance, and financial conditions. Internal reserves will be used preferentially for the reinforcement of business infrastructure and capital investments for developing business fields based on mid- and long-term perspectives. Annual dividends of 20 yen per share were implemented in FY2008 despite severe business conditions.

### Chart of Changes in Annual Dividends per Share

	FY2005	FY2006	FY2007	FY2008	Plan for FY2009
Dividends (yen)	20*	22	22	22	18

\* 20 (of which, 2 is commemorative dividend)

## ■ IR Activities

We hold main and midterm accounting briefings twice a year. Upper management provides explanations on matters like performance and management policies for the future.

We also hold individual meetings for securities analysts and institutional investors. We willingly respond to requests for data, and conduct frequent inspection tours of our flagship Kashima Factory.



Accounting Briefings



Inspection tour at our Kashima Factory

## ■ General Shareholders' Meeting

We consider our General Shareholders' Meeting to be an important opportunity for communicating with all of our shareholders. In order to ensure the attendance of many of our shareholders we try to hold the meeting as earlier as possible and avoid days when many other companies hold their shareholder meetings. We have devoted ourselves to creating an atmosphere that is conducive to asking questions making comments.

Beginning with our General Shareholders' Meeting in June 2007, we uploaded notifications on the holding of the meeting to our company's website and have adopted the exercise of voting rights via the Internet to make it possible for more shareholders to offer their vote.

We hold an informal gathering for shareholders following the General Shareholders' Meeting in order to deepen exchange through direct dialogue between our company's executives and all of our shareholders.



General Shareholders' Meeting



Informal gathering of shareholders

## ■ Timely Disclosures of Information

We promptly disclose important information related to management, such as accounting information and business reports, after they have been determined or when they arise. This is done in accordance with the disclosure provisions of the Tokyo Stock Exchange in order to assist investors with their investment decisions.

Our website provides information such as timely data disclosures, press releases, accounting briefings materials, corporate information, including fact books, and financial information, to be proactively and promptly disclosed.

On July 25, 2008, our president Sakurai appeared on TV Tokyo's Stock & Finance News program and introduced our business structure and some of our typical products to promote our company.

Website Address <http://www.adeka.co.jp>

# Environmental Reports



Regarding the conservation of the global environment, we aim to devote maximum effort towards product safety, the prevention of accidents and disasters, and a reduction of the overall burden we place on the environment, while ensuring continued human health and safety. To that end, we promote the "4 safety activities" (quality and logistics, environment, labor and health, and our equipment), taking this to a step further with our concept of "safety with peace of mind" as we strive to gain a greater degree of trust from both our customers and society. Furthermore, based on the ISO Management System (quality, environment and workplace), we take a very thorough approach to quality assurance, food safety and chemical safety management. By consistently applying these management systems and further improving our manufacturing technology, we aim to create a safer society with peace of mind and an even greater degree of diversity.

In addition, in FY2009 we aim to improve our crisis management by applying Business Continuity Management System.

**Takumi Iio**, Director and Operating Officer, General Manager, Production Division, Environmental Protection Division

## Basic Environmental Policy/Environmental Action Plan/Environmental Action Goals

### 1. Basic Environmental Policy

#### (1) Corporate-wide global environmental conservation and pollution prevention efforts

Each one of us must be highly conscious of environmental conservation, striving for harmony and integration with the environment in all aspects of our business activities. In order to carry out fair and sustainable activities, there must be cooperation, not only between departments within each company, but also in a broader sense with other companies in the group as ADEKA adopts a comprehensive and organic approach to its efforts.

#### (2) Corporate responsibility

In order to prevent environmental pollution across the entire product life cycle, from research through to development, procurement, manufacturing, sales, logistics and waste disposal, in addition to making efforts in environmental burden reduction through the conservation of energy and natural resources, we are also promoting the development and provision of environmentally-friendly products and environmental conservation technology. Furthermore, we actively use products that promote environmental conservation, and we are making every effort to contribute to the realization of a sustainable society.

#### (3) Contributing to society

We are keenly aware of the fact that a corporation is a member of society and we steadfastly comply with environmental laws and regulations. In addition to cooperating with government policy, we release environmental information and lend support and cooperation to environmental conservation activities, both in society at large and in the local community.

### 2. Environmental Action Plan

#### (1) Ensure health and safety and reduce the environmental burden through promotion of the "4 safety activities."



"4 safety activities" logo

Labor safety	Ensure work safety and prevent disaster through risk assessment and danger prediction activities.
Quality Safety	Provide appropriate information in handling chemical substances and products, and prevent quality complaints.
Equipment Safety	Prevent accidents by selfinitiated protection activities, and systematic facility upgrades.
Environmental Safety	Promote energy conservation, waste reduction, and reduction of toxic waste generation.

#### (2) We promote a business management ethos that complies with legislation and social ethics.

#### (3) We actively promote communication, both within and outside the company.

#### (4) When moving into overseas markets, we address the issue of environmental conservation, as well as safety and quality assurance.

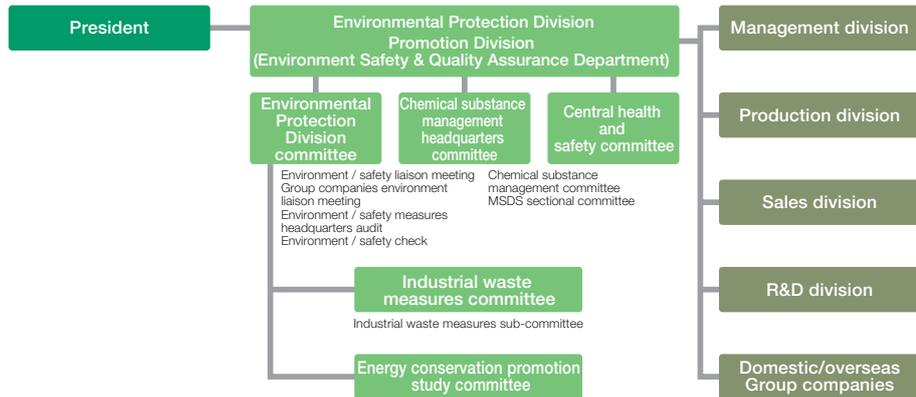
### 3. Environmental Action Goals

Area of effort	Goal
1. Ensure safety	(1) Eradicate accidents in the workplace and while commuting to and from work - zero accidents. (2) Eradicate major accidents involving manufacturing facilities - zero accidents.
2. Constant improvement of environmental performance.	(1) Promotion of energy conservation ① Reduce basic units of energy by annual rate of over 1%. By FY2010, achieve a 10% improvement over the FY1990 level. ② Reduce CO <sub>2</sub> emissions, with a 10% reduction by FY2010 over the FY1990 level. (2) Reduction of industrial waste ① Reduce waste generation. Reduction by annual rate of 1% or more. ② Improve the rate of waste recycling. Taking the FY1990 level as 100, by FY2010 improves waste disposal outsourcing rate by 76%. ③ By FY2010, eliminate the volume of final landfill (waste generation of less than 0.5%) (3) Track and reduce the volume of toxic chemical substance emissions (the company's manufacturing division) ① Reduce emission of PRTR substances by an annual rate of 10%. ② Develop activities for reducing the environmental burden arising from logistics.
3. Promote green procurement	Improve green procurement rate (of stationary and specified non-stationery items, by 80% or more)
4. Management systems	Expand and continuously promote the Environmental Management System (ISO14001) and the Occupational Health and Safety Management System (OHSAS18001). In addition, acquire certification for Integrated Management System (IMS).

# Environmental management promotion organization and promotion activities

## 1. Environmental management promotion organization

The Environmental Protection Division, headed by a Director and Operating Officer, controls chemical substance management, waste management, energy conservation promotion etc., and based on their instructions, each office and factory develops environmental management activities.



## 2. Environmental management progress

The Environmental Protection Division designs an annual policy/mid-to-long-term plan ('Plan'), followed by policy implementation at each office and factory ('Do'), policy management check ('Check') and review ('Action'). In this way, management activities are developed as we aim for continuous improvement.



- 1 Planning (Plan): Formulation of annual policy and action plan**  
The headquarters committee designs an annual policy and mid-to-long term plan for environment/safety and the management of chemical substances and industrial waste. In accordance with these, each office and factory designs its own policy and plan.
- 2 Implementation (Do): Activities at each office & factory**  
In accordance with the annual policy, activities are promoted using various management system techniques including ISO.
- 3 Check (Check): Checking of policy management (audit activities)**  
President-level audit, Environmental Protection Division audit, and system audit are carried out.
- 4 Review (Action): Review and continuous improvement**  
By reviewing the annual policy, as well as taking corrective and preventative action, we aim for continuous improvement.

# Communication regarding the environment and safety

## Publication of site reports

Site reports (booklets) are published by each of the six ADEKA factories, as well as Oxirane Chemical Corporation's Mie Factory.

These also appear on ADEKA's website, and every year information is disclosed on a regular basis regarding each factory's environmental/occupational health and safety policies, as well as its activities and performance results in the areas of environment, health and safety, maintenance, and disaster prevention.



## Results of activities - Overview

### FY2008 Attainment results with regard to environmental action goals

Having established numerical targets with regard to key areas for environmental conservation, we are moving forward with our activities. What follows are the attainment results for FY2008 with regard to each type of effort that has been made including domestic group companies.

Area of effort	Mid-to-long-term goal	FY2008 goal
Eradication of disasters and accidents	(1) Zero accidents in the workplace (2) Zero major accidents involving manufacturing facilities	(1) Zero accidents in the workplace Zero accidents while commuting to and from work (2) Zero major accidents involving manufacturing facilities
Promotion of energy conservation	(1) By FY2010, improve the amount of basic units of energy by 10% over the FY1990 level	(1) Reduce basic units of energy by annual rate of 1% year-on-year.
Reduction of greenhouse gas emissions	(1) By FY2010, to achieve a 10% reduction over the FY1990 level of CO <sub>2</sub> emissions	(1) To achieve a 1% improvement year-on-year in terms of the volume of CO <sub>2</sub> emissions
Reduction of industrial waste	(1) Achieve zero final landfill by FY2010 (zero emissions <sup>**</sup> ) (2) By FY2010 improve the waste disposal outsourcing rate by at least 76%.	(1) Reduce the annual rate of waste generation by 1% (2) Promote zero emissions
Reduction of environmental burden substance emissions	(1) Manage the emission of environmental pollutants in the air and the water system (2) Reduce the emission of PRTR <sup>*</sup> substances By FY2010 achieve a reduction of 40% over the FY2000 level (3) Reduce the volume of water discharged into the public water system	(1) Reduce the annual rate of PRTR substance emissions by 10%

## Environmental data

### FY2008 Environmental performance results

No.	Area of effort	Unit	Kashima factory	Chiba Factory	Mie Factory	Fuji Factory	Akashi Factory	Soma Factory	
1	Energy and CO <sub>2</sub>	① Total amount of energy used in crude oil equivalent	kℓ	24,405	11,498	7,710	19,269	2,802	1,049
		② Total amount of crude oil equivalent above, in basic units	kℓ/t	0.12	0.18	0.56	0.40	0.15	0.62
		③ Volume of CO <sub>2</sub> generated	t	56,422	25,124	15,693	60,276	4,400	2,830
		④ Volume of CO <sub>2</sub> generated, in basic units	t/t	0.27	0.40	1.14	1.23	0.23	1.68
2	Air-related	① Volume of SO <sub>x</sub> emissions	t	2.05	0.00	0.00	0.00	—	0.19
		② Volume of NO <sub>x</sub> emissions	t	1.00	11.20	14.00	17.20	—	33.95
		③ Volume of dust/soot generated	t	—	0.80	1.50	0.00	—	5.23
3	Water system-related	① Total volume of water received	m <sup>3</sup>	721,577	3,322,549	1,362,625	5,970,734	287,950	205,045
		② Total volume of water discharged	m <sup>3</sup>	681,888	154,791	116,789	959,224	64,463	26,805
		③ Volume of COD generated	t	11.30	1.19	1.90	22.00	0.34	0.66
		④ Volume of BOD generated	t	10.30	0.00	1.60	20.20	0.38	0.30
4	Waste-related	① Volume of waste generated	t	3,171	13,211	10,093	194	588	3,083
		② Volume of waste outsourced	t	3,171	1,000	3,398	194	588	20
		③ Volume of final landfill	t	0	8	99	1	9	0
5	Toxic chemical substances	① Volume of PRTR emissions	t	0.1	1.2	0.2	0.0	0.0	0.7
		② Volume of PRTR transported	t	150	20	40	0	0	4

\*1 Zero emissions: ADEKA defines zero emissions as the volume of final landfill being less than 0.5% of the volume of waste generated, and is working towards its achievement. This definition is based on the idea, proposed by the United Nations University, "to achieve zero emissions in society as a whole by taking waste generated in one industry and recycling it in another."

\*2 PRTR (Pollutant Release and Transfer Register): A scheme which tracks, gathers and releases data on a wide variety of toxic chemical substances, where they originated, to what degree they have been discharged into the environment, or alternatively, the extent to which they have been carried outside company offices and factories.

\*3 SOx (Sulfur oxides): Sulfur oxides are generated from burning fossil fuels, and are the main causes of acid rain and asthma. Sulfur oxides (SOx) change into H<sub>2</sub>SO<sub>4</sub> in the atmosphere, which is one of the causes of acid rain.

\*4 NOx (Nitrogen oxides): The term 'nitrogen oxides' refers to substances such as nitrogen monoxide (NO) and nitrogen dioxide (NO<sub>2</sub>) that are generated when matter is burnt at a high temperature and nitrogen (N<sub>2</sub>) and oxygen (O<sub>2</sub>) combine in the atmosphere. In particular, in high concentration, nitrogen oxides (NO<sub>2</sub>) have an adverse effect on the human respiratory system and contribute to photochemical smog and acid rain.

\*5 COD (Chemical oxygen demand): This refers to the amount of oxygen required to decompose waste in water through oxidation.

\*6 BOD (Biochemical oxygen demand): This refers to the amount of oxygen required for bacteria to decompose waste in water.

FY2008 results	Evaluation	FY 2009 goals	Covered on page(s)
<ul style="list-style-type: none"> <li>There was one accident resulting in lost working time in ADEKA group, six less than the previous year. In addition, there were twelve accidents without lost workdays, fourteen less than the previous year.</li> <li>There was one accident on the way either to or from work, two less than the previous year.</li> <li>Continuing to hold our "4 safety activities" improvement case presentations for the purpose of raising safety awareness.</li> </ul>	×	(1) Zero accidents in the workplace Zero accidents while commuting to and from work (2) Zero major accidents involving manufacturing facilities	16
<ul style="list-style-type: none"> <li>There was a decrease of 6.2% over the previous year in terms of the volume of energy used, and there was deterioration of 3.7% over the previous year in terms of basic units of energy. Although the basic units of energy have deteriorated due to the decrease of production volume, the crude oil equivalent volume has decreased by 6.0%.</li> <li>There was an improvement of 21.6% over FY2002 in terms of basic units of sales.</li> <li>The actual crude oil equivalent reduction rate improved by facility improvement and management fortification is 6.3%.</li> </ul>	△	(1) A 1% year-on-year improvement in basic units of energy	29~30
<ul style="list-style-type: none"> <li>There was a 6.1% decrease in CO<sub>2</sub> emissions year-on-year.</li> <li>Cogeneration facility was introduced and electrolytic facility was updated, which could effectively reduce overall CO<sub>2</sub> emission by 6.1%.</li> <li>There has been a 10.7% reduction compared to FY1990 level.</li> </ul>	○	(1) To achieve a 1% improvement year-on-year in terms of the volume of CO <sub>2</sub> emissions	29~30
<ul style="list-style-type: none"> <li>There was a 13.0% year-on-year reduction in the volume of waste generated, as well as a 12.0% drop in the volume outsourced to contractors.</li> <li>There was a 1% improvement in the recycling rate, up to 62%.</li> <li>With 129 tons of waste going to final landfill, there was a 33.0% reduction over the previous fiscal year.</li> <li>A zero emissions rate of 0.4% at ADEKA's six factories meant that there was a 0.1% improvement.</li> <li>Of the six ADEKA factories, three of them - Kashima, Chiba, and Soma - have achieved zero emissions.</li> </ul>	○	(1) Reduce the annual rate of waste generation by 1% (2) Promote zero emissions	27~28
<ul style="list-style-type: none"> <li>SOx<sup>*3</sup>, NOx<sup>*4</sup>, dust/soot, COD<sup>*5</sup> and BOD<sup>*6</sup> were all managed based on a self-regulated standard that goes beyond what is legally required.</li> <li>With 56 substances being officially designated as PRTR substances, the volume discharged was 2.3 tons - 0.4 ton less than the previous year, equating to a 15% reduction year-on-year.</li> </ul>	○	(1) Reduce the annual rate of PRTR substance emissions by 10%	26

Evaluation criteria ○: FY2008 goals reached  
 △: FY2008 goals almost reached  
 ×: FY2008 goals not yet reached

Factory sub-total	R&D lab sub-total	Head office sales division sub-total	Sub-total for ADEKA as a whole
66,733	1,896	830	69,459
0.19	—	—	—
164,745	2,670	1,176	168,591
0.47	—	—	—
2.24	0.09	0.00	2.33
77.35	0.06	0.00	77.42
7.53	0.00	0.00	7.53
11,870,480	42,280	18,664	11,931,424
2,003,960	1,645	18,664	2,024,269
37.39	0.03	0.00	37.42
32.78	0.03	0.00	32.81
30,340	307	217	30,864
8,371	307	217	8,895
117	8	0.00	125
2.2	0.1	0.0	2.3
214	10	0	224

ADEKA Fine Foods Corp.	Oxirane Chemical Corp.	Uehara Foods Industry Co., Ltd.	Other domestic Group companies	Group companies sub-total	Overseas Group companies sub-total	Grand total
366	1,175	904	328	2,773	15,614	87,846
0.14	0.12	0.20	—	0.45	3.50	—
830	2,843	1,403	481	5,557	32,813	206,961
0.31	0.29	0.31	—	0.90	7.32	—
0.22	0.00	4.24	0.00	4.46	6.49	13.28
0.16	0.00	0.57	0.00	0.73	17.05	95.19
0.00	0.00	0.18	0.00	0.18	1.34	9.05
75,493	447,273	83,086	7,173	613,025	295,026	12,839,475
39,057	429,273	83,086	0	551,418	150,733	2,726,418
1.95	1.24	0.00	0.00	3.19	6.96	47.57
0.00	0.61	4.70	0.00	5.31	1.14	39.26
125	3,925	326	286	4,662	3,893	39,419
125	2,633	326	286	3,370	3,893	16,158
0	1	0	3	4	120	249
—	3.5	—	0	3.5	—	5.8
—	8	—	0	8	—	232

# Material flow of business activities

## Material flow of environmental burden

### Tracking and managing environmental burden by using the "core set" of indices

From FY2002, we have been tracking the volume of input and output levels in order to manage material flow in our business activities.

This is a management system of 9 core indices\* in terms of environmental flow (material balance). The purpose of this system

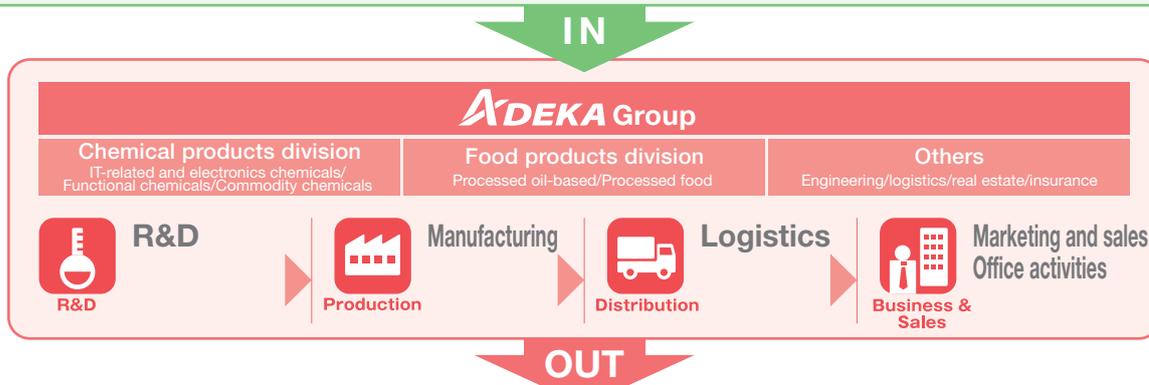
is to promote sustainable material cycles and countermeasures for global warming. Furthermore, the company tracks and manages the consolidated environmental burden of our entire business operation by managing these core indices as one "core set." FY2008, overseas product bases are included for management.

\* 9 core indices: The Ministry of the Environment's "Environmental Performance Measure Guideline for Business" (2002 edition) recommends indicating and managing input and output of business operations using the 9 indices.

## INPUT

Energy use reduction and future efforts  
We are working hard to reduce the volume of energy used, not only in the manufacturing division, but also in non-manufacturing and logistics divisions.

 <p><b>Materials</b> 364,153t (8.3% decrease year-on-year)</p> <p><small>Materials</small> Metal raw materials, resins, parts, products, others</p>	 <p><b>Energy</b> <b>Electricity</b> (crude oil equivalent) 34,849kℓ (4.3% decrease year-on-year) <b>Procured steam and fuel</b> (crude oil equivalent) 52,997kℓ (6.3% decrease year-on-year)</p>	 <p><b>Water</b> 12,839 thousand t (9.9% decrease year-on-year)</p> <p><small>Water</small> Water for industrial use, waterworks, seawater, groundwater</p>
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## OUTPUT

Management linked to environmental burden reduction  
We are reducing the volume of final industrial waste landfill, with the aim of achieving zero emissions.

 <small>Atmospher</small>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px 2px 10px;"><b>Greenhouse gas emissions</b></td> <td style="padding: 2px 10px 2px 10px;">210,421t (6.1% decrease year-on-year)</td> </tr> <tr> <td style="padding: 2px 10px 2px 10px;"><b>SOx emissions</b></td> <td style="padding: 2px 10px 2px 10px;">13t (91.4% decrease year-on-year)</td> </tr> <tr> <td style="padding: 2px 10px 2px 10px;"><b>NOx emissions</b></td> <td style="padding: 2px 10px 2px 10px;">95t (37.9% increase year-on-year)</td> </tr> <tr> <td style="padding: 2px 10px 2px 10px;"><b>Dust/soot emissions</b></td> <td style="padding: 2px 10px 2px 10px;">9t (80.0% increase year-on-year)</td> </tr> </table>	<b>Greenhouse gas emissions</b>	210,421t (6.1% decrease year-on-year)	<b>SOx emissions</b>	13t (91.4% decrease year-on-year)	<b>NOx emissions</b>	95t (37.9% increase year-on-year)	<b>Dust/soot emissions</b>	9t (80.0% increase year-on-year)	 <small>Product</small>	<p><b>Products</b> Volume manufactured 416,250t (10.9% decrease year-on-year)</p>		
<b>Greenhouse gas emissions</b>	210,421t (6.1% decrease year-on-year)												
<b>SOx emissions</b>	13t (91.4% decrease year-on-year)												
<b>NOx emissions</b>	95t (37.9% increase year-on-year)												
<b>Dust/soot emissions</b>	9t (80.0% increase year-on-year)												
 <small>Chemical</small>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px 2px 10px;"><b>PRTR emissions</b></td> <td style="padding: 2px 10px 2px 10px;">5.8t (11.5% increase year-on-year)</td> </tr> </table>	<b>PRTR emissions</b>	5.8t (11.5% increase year-on-year)										
<b>PRTR emissions</b>	5.8t (11.5% increase year-on-year)												
 <small>Water</small>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px 2px 10px;"><b>Volume of waste water discharged</b></td> <td style="padding: 2px 10px 2px 10px;">2,726 thousand t (18.9% increase year-on-year)</td> </tr> <tr> <td style="padding: 2px 10px 2px 10px;"><b>Volume of COD discharge</b></td> <td style="padding: 2px 10px 2px 10px;">47t (85.2% decrease year-on-year)</td> </tr> <tr> <td style="padding: 2px 10px 2px 10px;"><b>Volume of BOD discharge</b></td> <td style="padding: 2px 10px 2px 10px;">39t (77.2% decrease year-on-year)</td> </tr> <tr> <td style="padding: 2px 10px 2px 10px;"><b>Volume of untreated water discharge</b></td> <td style="padding: 2px 10px 2px 10px;">10,249 thousand t (7.0% decrease year-on-year)</td> </tr> <tr> <td style="padding: 2px 10px 2px 10px;"><b>Volume of circulated water</b></td> <td style="padding: 2px 10px 2px 10px;">68,339t (3.8% decrease year-on-year)</td> </tr> </table>	<b>Volume of waste water discharged</b>	2,726 thousand t (18.9% increase year-on-year)	<b>Volume of COD discharge</b>	47t (85.2% decrease year-on-year)	<b>Volume of BOD discharge</b>	39t (77.2% decrease year-on-year)	<b>Volume of untreated water discharge</b>	10,249 thousand t (7.0% decrease year-on-year)	<b>Volume of circulated water</b>	68,339t (3.8% decrease year-on-year)		
<b>Volume of waste water discharged</b>	2,726 thousand t (18.9% increase year-on-year)												
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 <small>Waste</small>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px 10px 2px 10px;"><b>Volume outsourced</b></td> <td style="padding: 2px 10px 2px 10px;">16,158t (11.3% decrease year-on-year)</td> </tr> <tr> <td style="padding: 2px 10px 2px 10px;"><b>Volume disposed of in final landfill</b></td> <td style="padding: 2px 10px 2px 10px;">249t (29.9% decrease year-on-year)</td> </tr> </table>	<b>Volume outsourced</b>	16,158t (11.3% decrease year-on-year)	<b>Volume disposed of in final landfill</b>	249t (29.9% decrease year-on-year)								
<b>Volume outsourced</b>	16,158t (11.3% decrease year-on-year)												
<b>Volume disposed of in final landfill</b>	249t (29.9% decrease year-on-year)												

Scope of monitoring: ADEKA's domestic and overseas group companies

Index definitions  
 Materials: Excludes containers and packaging  
 Water: Includes cooling water  
 PRTR discharge volume: Volume of Class 1 Designated Chemical Substances discharged

# Managing the emission of environmentally polluting substances

## 1. Managing the emission of hazardous chemical substances (related to the PRTR Law)

As a member of the Japan Chemical Industry Association (JCIA), we began our research activities in FY1997, and we continue to carry out research into 480 PRTR substances classed as such by JCIA, of which 354 are officially designated as PRTR.

The volume of these substances discharged into the air was 5.8 tons - an increase of 0.6t (12%) year-on-year - while the volume discharged into the water system was 0.01t, representing the same as in the previous year. There were no emissions into the soil. The volume transported was 231t, equating to a reduction of 39t (14%). The table below shows the 9 substances with the highest level of emission/transported volume.

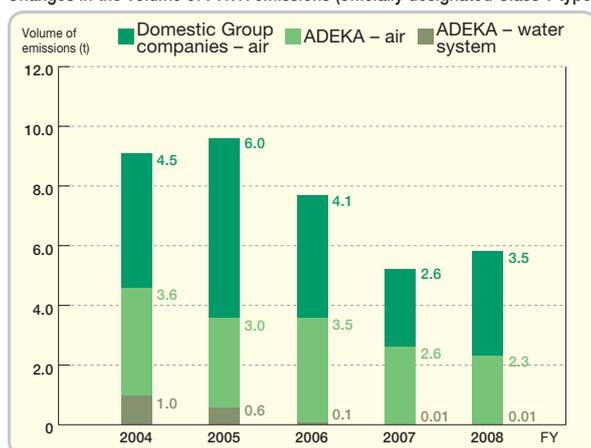
Calculations were made from figures taken from FY2004 onwards (performance results for FY2003), covering ADEKA's 6 factories, plus data for 3 area R&D facilities and the Oxirane Chemical Corporation.

Due to the revision of the Air Pollution Control Law in April 2006, VOC emission controls have been strengthened. Although there are no facilities within the ADEKA Group that fall within the remit of the legislation, as a member of the Japan Chemical Industry Association, we will make voluntary efforts in this regard.

### Emission volume/transported volume of Class 1 designated chemical substances covered by the PRTR law (tons/year)

Substance	FY2008 performance results			
	Volume of emissions			Transported volume
	Air	Water system	Soil	
Toluene	4.8	0.00	0.0	17.5
Molybdenum compound	0.0	0.01	0.0	3.5
Chloromethane (methyl chloride)	0.2	0.00	0.0	0.0
Xylene	0.1	0.00	0.0	71.2
Epichlorohydrin	0.1	0.00	0.0	1.3
Dichloromethane	0.4	0.00	0.0	15.0
Phenol	0.0	0.00	0.0	40.0
Ethyl benzene	0.0	0.00	0.0	45.3
Ethylene glycol	0.0	0.00	0.0	28.5
Other	0.2	0.00	0.0	9.0
Total (t)	5.8	0.01	0.0	231.3

### Changes in the volume of PRTR emissions (officially designated Class 1 type)



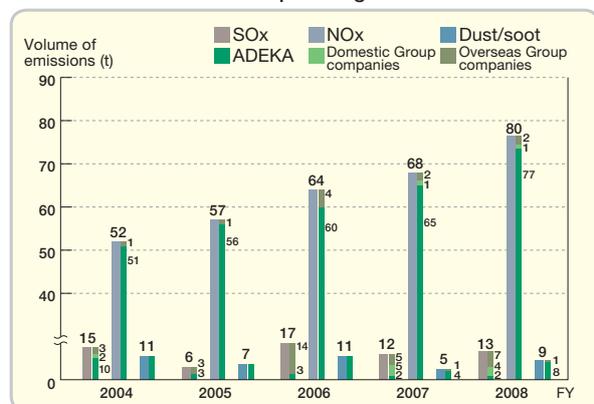
## 2. Managing the emission of environmentally polluting substances (related to the PRTR Law)

We are making a concerted effort to reduce the volume of environmentally polluting substances discharged into the air and water system. The results for FY2008 are shown below.

### Managing the emission of air polluting substances

Changes in the volume of emissions of the air polluting substances SOx, NOx, and dust/soot are shown in the following graph.

Volume of emissions of air polluting substances

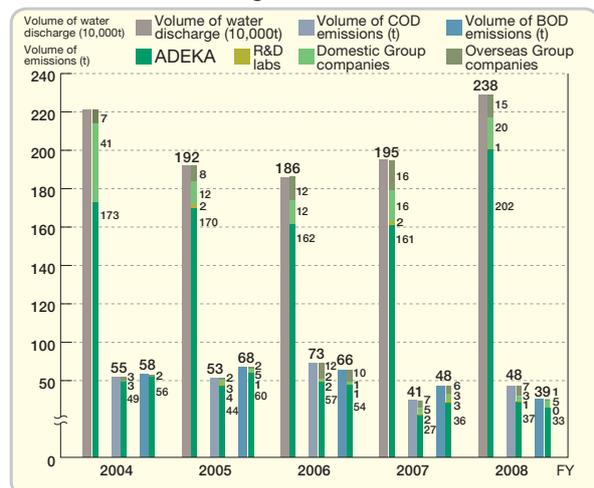


### Managing water discharge volume and COD/BOD

In order to preserve the water quality of Tokyo Bay, Ise Bay and the Seto Inland Sea, a "water quality total emission control" has been established. This regulates the volume of water and sewage flow from factories, businesses and households, because the overall volume of water discharge is higher in areas where there is a dense concentration of businesses and population. Based on this, every domestic office and factory is making efforts to reduce their overall volume of water consumption.

As can be seen from the graph below, although the volume of water discharge has risen slightly, there has been a reduction in the volume of both COD and BOD discharged into the water system. The reductions made by the Kashima factory are a key factor behind this.

Volume of water discharge and COD/BOD emissions



# Measures to deal with industrial waste (efforts made towards zero emissions)

## 1. Industrial waste reduction in FY2008

While production volume in FY2008 fell by 10% year-on-year, the volume of industrial waste generated fell by 13%.

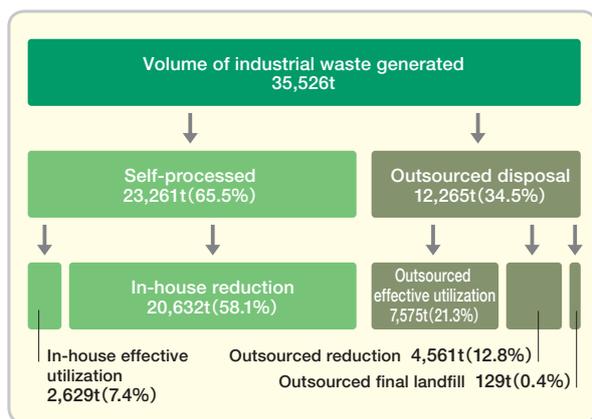
There was a reduction of 12% in the amount of waste outsourced to contractors, and we were able to reduce the amount of final landfill by 33%.

It should be noted that although the 9 Group companies are included in company reports from the 2004 edition onwards (performance results for FY2003), from FY2006 onwards Uehara Foods Industry Co. Ltd. along with 7 overseas production sites have also been included, and from FY2007 one other overseas company has been added. Therefore, the figures given cover a total of 8 overseas production sites.

Goal	Result
① To achieve zero final landfill by 2010	Final landfill volume: 129t (a reduction of 63t year-on-year)
② By FY2010, to increase the rate of recycling outsourced to contractors by 1.5 times the FY1990 level (i.e. 76%)	Rate of recycling: 62% (a 1% increase year-on-year)

## 2. Overview of industrial waste generation and disposal

Although 35,526 tons of industrial waste was generated domestically during FY2008, 65% was disposed of on our own premises, with the remaining 35% being outsourced to a contractor. The volume of outsourced final landfill was 129t, or 0.4% of the total amount of waste generated.

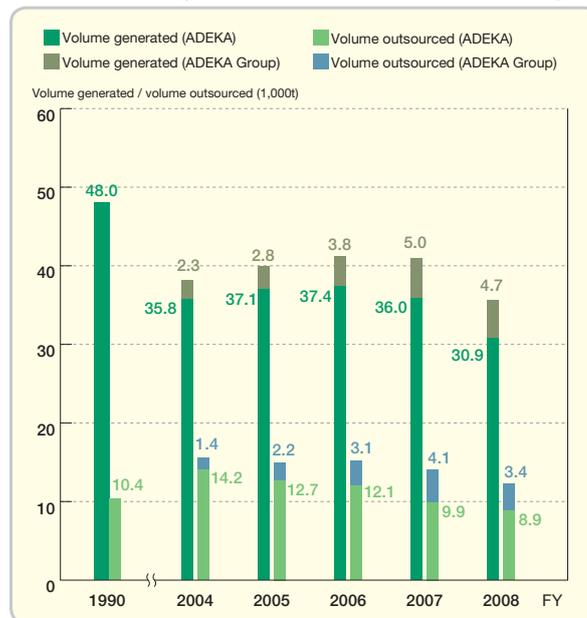


## 3. Waste generation prevention and volume reduction

The volume of industrial waste generated domestically in FY2008 was 35,526t, representing a 13% (5,420t) decrease year-on-year. The volume of industrial waste generated by the 8 overseas companies, figures for which began to be calculated the previous year, was 3,893t, which amounted to a year-on-year decrease of 8% (346t).

The amount outsourced to contractors fell by approximately 1,700t (12%).

Volume of waste generated and the shift to outsourcing

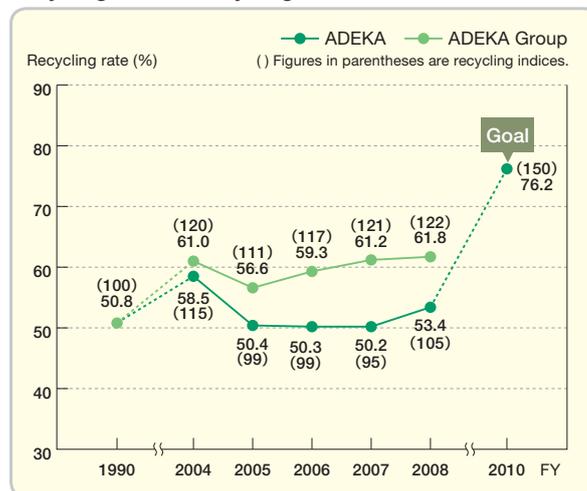


A change in the way the volume of industrial waste is calculated from the FY2004 performance results onwards, based on national guidelines, the volume of discharged sludge generated has been revised so it now refers to the volume of sludge after drainage.

## 4. Recycling

We were able to recycle 7,575 tons of waste, making effective use of it as soil conditioner, cement, paving material and heat. This figure represents 62% of the 12,265 tons that was outsourced to private contractors. This equates to a figure of 122 compared to the base year (FY1990, where the recycling rate of 50.8% is taken as 100).

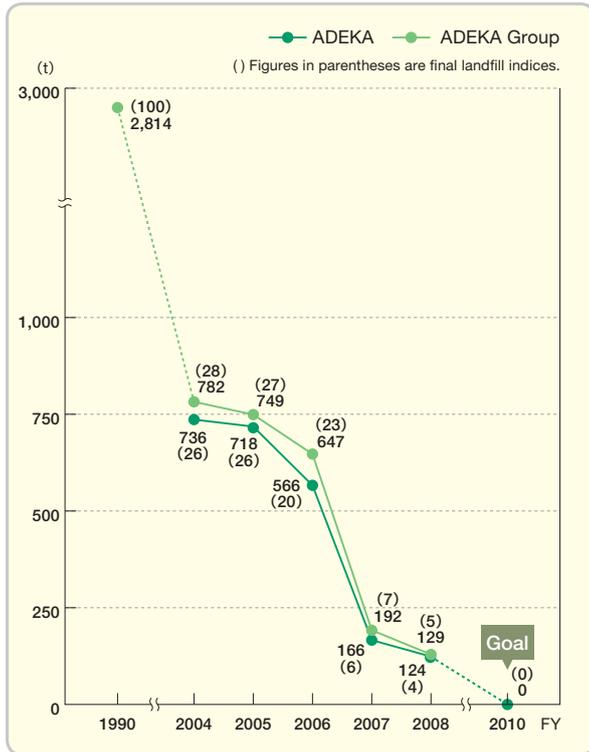
Recycling rate and recycling index



## 5. Volume of final landfill

The volume of final landfill was 129t, meaning a reduction of 63t (33%) year-on-year. With the goal of achieving zero final landfill by 2010, we are continuing to look into disposal methods.

Volume of final landfill and final landfill index



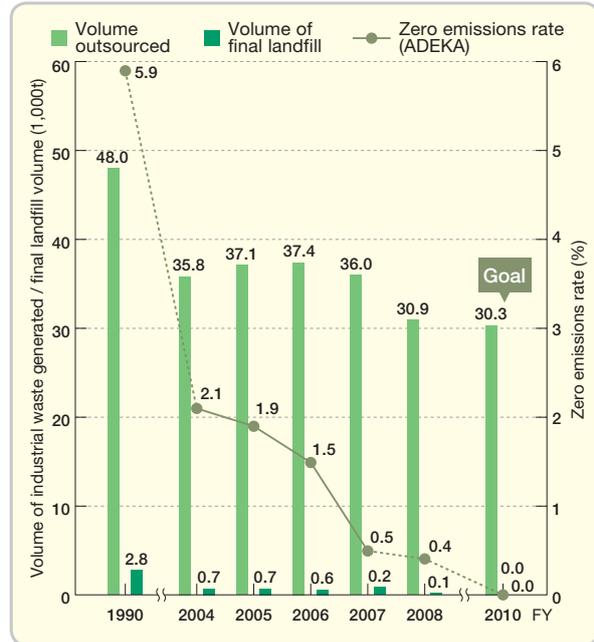
## 6. The challenge of achieving zero emissions

ADEKA defines zero emissions as "the volume of final landfill being less than 0.5% of the volume generated," and the entire company is engaged in activities to achieve zero emissions.

(We changed the definition to the one adopted by many companies in previous year.)

In FY2008, the zero emissions rate of all factories improved to the level of 0.4% (as opposed to 0.5% the previous year).

Zero emissions rate (ADEKA)

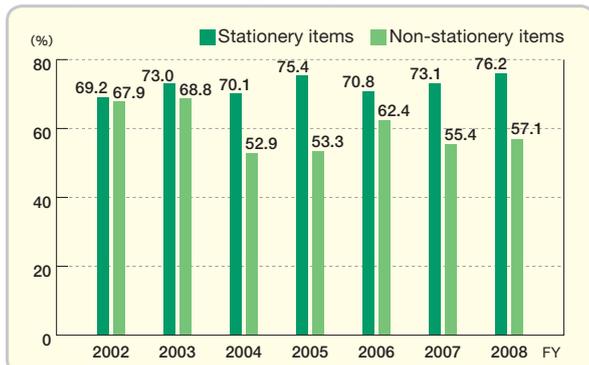


## Promote green procurement

### Green procurement rate

The FY2008 green procurement rate for stationery was 76.2%, a 3.1% increase year-on-year. With the aim of firmly establishing green procurement to include the Group companies as well,

Green procurement rate (ADEKA)



\* Green procurement rate = the number of eco-products / the overall number of items purchased

ADEKA will continue to promote the raising of the procurement rate. The green procurement rate for non-stationery items was 57.1% (a 1.7% increase year-on-year). With the aim of expanding the range of items covered, our goal is to increase the procurement rate.

### Introduction of low-emission vehicles

Out of a total of 236 vehicles used in FY2008, 173 were hybrids and low exhaust emission vehicles - a rate of 75%.

The introduction rate increased by 3% as compared with FY2007.

# Promotion of CO<sub>2</sub> emission reduction and energy conservation

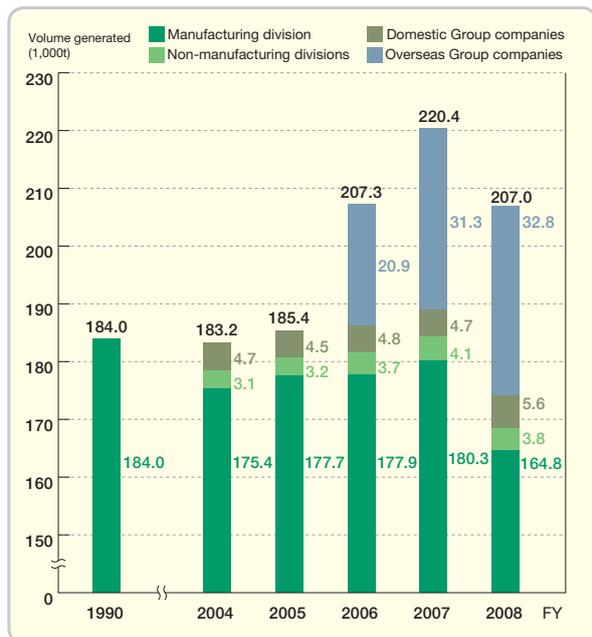
## 1. Promotion of CO<sub>2</sub> emission reduction in FY2008

We are making a concerted effort to reduce the volume of CO<sub>2</sub> emissions as we move towards the goal for FY2010. From FY2006, figures from our overseas companies have been included in the calculations.

	Goal	Result
1	Reduce CO <sub>2</sub> emissions by 10% over the FY1990 level by FY2010.	10.7% reduction as compared to FY1990
2	Reduce basic units of energy by a rate of 1% year-on-year.	An increase of 3.7% year-on-year
3	By 2010, improve the amount of basic units of energy by 10% over the FY1990 level	101.1% of the FY1990 level

※ 1 and 3 are the results of activities in ADEKA's manufacturing division.

### Volume of CO<sub>2</sub> emissions



- The volume of CO<sub>2</sub> emissions in FY2008 was 207,000t, representing a decrease of 13,400t (6.1%) over the FY2007 level (220,400t).
- The volume of emissions in ADEKA's manufacturing division in FY2008 amounted to 164,800t, which was 89.3% of the FY1990 level.
- The volume of emissions of non-energy source CO<sub>2</sub> and the 6 greenhouse gas substances specified in the Global Warming Law\*1 was 3,445t in CO<sub>2</sub> equivalent. The total volume of greenhouse gas emissions was 207,300t.

Global Warming Law\*1: FA law concerned with the promotion of measures to cope with global warming, and whose goal is those measures, it set down in legislative form the Kyoto Protocol's Target Achievement Plan and was established in order to promote the reduction of emissions caused by social and economic activity.

## 2. Promotion of energy conservation

The ADEKA Group is actively pursuing energy conservation activities.

### Ednergy conservation activities at each factory



Cogeneration facility at the Chiba factory

#### Management activities

##### 1. Kashima factory

By reducing electric power through improving the fat production capacity and installing air ejectors, we reduced a crude oil equivalent of 112kl over the year.

##### 2. Kashima Factory-West

A crude oil equivalent of 18kl over the year was reduced through the installation of an inverter system in the utility pump, in addition 162,760kwh of electric power was reduced over the year by hastily repairing air-line leaks.

##### 3. Akashi factory

Three circulation pumps were constantly operated by improving the operation of the warm water circulation pump for raw oil, and intermittent operation with the operating time restricted was conducted by changing into control operation by setting the weekly timer.

The electric power was reduced to 41,075kwh over the year.

##### 4. Mie Factory

The air intake damper and exhaust were adjusted by controlling the air condition of the clean room, and cleaning level was measured, heat source system was stopped, the power system was stopped, temperature and humidity were recorded on weekdays as well as holidays, and the electric power and steam usage related to air conditioner operation were reduced.

The electric power was reduced into 379,072kwh over the year.

#### Improvements to facilities

##### 1. Chiba Factory

① Introducing the cogeneration facility helped reduce a crude oil equivalent of 101kl (which is equivalent to a 1.2% reduction for the entire factory), and reduced CO<sub>2</sub> emissions of 276t (which is equivalent to a 1.62% reduction for the entire factory).

This is gas turbine cogeneration facility is a system which uses city gas as fuel to generate the gas turbine and utilizes the waste heat to generate steam. This facility began operations in June, 2008.

② Fluorescent lamps used in offices were changed into Hf-type lamps (High-frequency lighting fluorescent lamp), and handy switch type lamps were installed, that allow the workers to control the lamps. Adopting 267 Hf-type fluorescent lamps helped to reduce the electric power 9,996kwh over the year.

##### 2. Fuji Factory

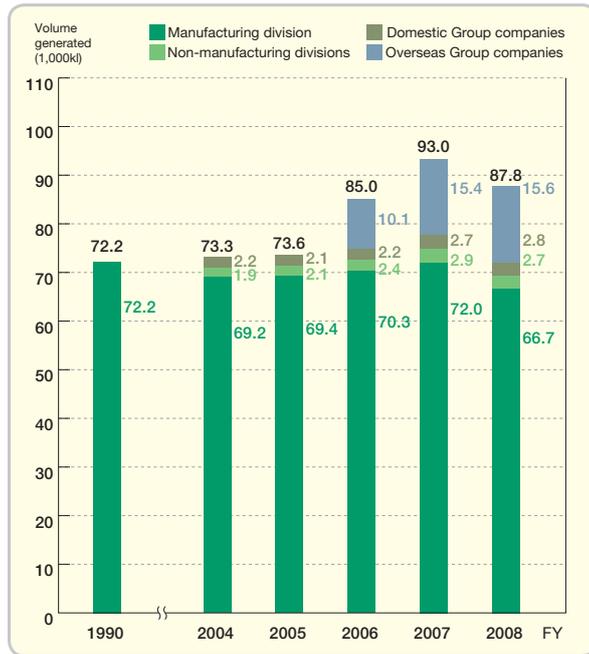
The electrolytic facilities were updated. As expected, a crude oil equivalent of 976kl, electric power of 1,974 kwh, and steam of 890t were reduced over the year respectively.

## ■ Amount of energy used, in crude oil equivalent

In FY 2008, the amount of energy consumed, in terms of crude oil equivalent, was 87.8 thousand kℓ. Compared to the FY2007 figure of 93.0 thousand kℓ, this was a decrease of 5.2 thousand kℓ (or 5.6%).

The actual figure, due to the improvement of facilities and tightening of management practices, was a reduction in crude oil equivalent of 5,424kℓ (6.2%).

### Amount of energy used (crude oil equivalent)



## ■ Manufacturing division

### ① Crude oil equivalent in basic units

(Crude oil equivalent amount of energy used (kℓ) / production volume (t))

In FY2008, crude oil equivalent in basic units stood at 0.187 kℓ/t, which amounts to a 3.7% deterioration from the previous fiscal year.

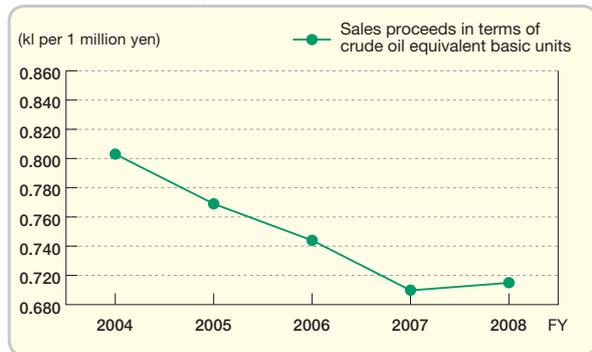
### ② Basic units of energy index (ADEKA manufacturing division)

Compared to the base year (taking FY1990 to be 100), the basic units of energy index for FY2008 was 101.1, representing a deterioration of 3.1% over the previous fiscal year. In FY2010, we aim to reach a figure of 90 in terms of the basic units of energy index.

## ■ Ratio of basic units of energy to sales proceeds (ADEKA)

From FY2001 onwards, basic units of energy based on sales proceeds have improved by 21.6% over the 7-year period.

### Basic units of energy based on sales proceeds



# Status of management system activities

## 1. Results of certification acquired

The results of certification acquired by ADEKA and its Group companies are given in the following table. In FY2009, ADEKA Fine Foods Corp. plans to obtain ISO22000 certification.

### ISO14001:

Kashima Factory: March 1998, Chiba Factory: May 2000, Mie Factory: December 1996, Fuji Factory: April 2000, Soma Factory: September 2000, Akashi Factory: March 2001, Oxirane Chemical Corp.: March 2001, Tokyo Environmental Measurement Center Co., Ltd.: February 2003, AMFINE CHEMCAL CORP.: September 2007, ADEKA KOREA CORP.: January 2006, Adeka Fine Chemical (Changshu) Co., Ltd.: July 2006, Adeka Fine Chemical (Taiwan) Corp.: February 2007

### ISO9001:

Kashima Factory: April 1996, Chiba Factory: July 1997, Mie Factory: June 1993, Fuji Factory: January 1997, Soma Factory: August 1998, Oxirane Chemical Corp.: October 1997, Adeka Clean Aid Corp.: October 1999, Tokyo Environmental Measurement Center Co., Ltd.: August 2005, Adeka Engineering & Construction Corp.: March 2002, Uehara Foods Industry Co., Ltd.: November 2005, AMFINE CHEMICAL CORP.: October 2004, ADEKA KOREA CORP.: October 2004, Adeka Fine Chemical (Shanghai) Co., Ltd.: May 2005, Adeka Fine Chemical (Changshu) Co., Ltd.: October 2005, Kukdo Chemical (Kunshan) Co., Ltd.: March 2004, Adeka Fine Chemical (Taiwan) Corp.: July 2006, ADEKA FINE CHEMICAL (THAILAND) CO.,LTD.: December 2006, FELDA OIL PRODUCTS SDN.BHD.: June 2006, ADEKA (SINGAPORE) PTE.LTD.: April 2006

### OHSAS18001:

Kashima Factory: November 2002, Chiba Factory: October 2003, Mie Factory: September 2001, Fuji Factory: December 2003, Soma Factory: November 2002, Akashi Factory: March 2003, Adeka Fine Chemical (Taiwan) Corp.: June 2007

### ISO22000:

Akashi Factory: April 2008, Adeka Foods (Changshu) Co., Ltd.: April 2007

### Integrated Management System:

Soma Factory: August 2004, Kashima Factory: November 2008

### HACCP:

Kashima Factory: March 2002, Akashi Factory: March 2004, ADEKA Fine Foods Corp.: January 1998

### TPM Award wins:

Kashima Factory: 2007 Award for Excellence (Special Award), Chiba Factory: 1994 Award for Excellence, Mie Factory: 1995 Award for Excellence, Akashi Factory: 2004 Award for Excellence, Oxirane Chemical Corp.: 1995 Award for Excellence

### BCMS<sup>\*1</sup>:

Adeka Fine Chemical (Taiwan) Corp.: July 2008

\*1 BCMS:Business Continuity Management System

# R&D and environmentally conscious technology

## 1. Research and development system

This is made up of R&D labs that are closely connected with current business activities, a hi-tech materials R&D lab, the exploratory division of business operations, which will be critical for the future, and a research planning division that supports these other research facilities.



Ogu R&D Laboratory

Research facility	Main products in development
Information Media Materials Development Laboratory	Recording materials, photo-reactive materials, imaging materials
Electronic Materials Development Laboratory	Semiconductor materials, etching agents, hyperoxidation products
Polymer Additives R&D Laboratory	Antioxidants, light stabilizers, stabilizers, plasticizing agents, nucleating agents, stain-proofing agents, antibacterial agents, flame retardant
Functional Chemicals Development Laboratory	Surfactants, lubricants, epoxy resins, hardening agents, urethane resins, sealants
Food Development Laboratory	Margarine inserts for commercial use/margarine for kneading, filling cream, whipped cream, functional mayonnaise, frozen dough
Advanced Materials R&D Laboratory	Mevalonic acid, $\beta$ -glucan, Nano hybrid silicone
Planning Department	R&D Support

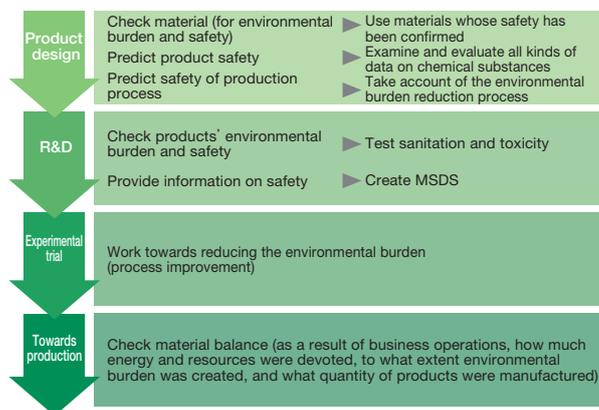
## 2. Basic principles of R&D

R&D is the lifeblood of a manufacturer, and being fully aware that new products and business are the driving force for company development, we focus on growth areas. In keeping with the strategy of each unit of our business, we promote the development of new products and technology and are moving forward with the development of sophisticated products that are original and keep pace with rapid technological innovations.

In terms of concrete examples of our R&D, in the area of chemical products there are next-generation semiconductor materials, chemicals for information and electronics, which play a part in IT, and resin additive-related fields. In regards to food products, one could cite bio, functional food, food products for the health-conscious and so forth, all of which are given emphasis as we move forward with our R&D.

Environmental issues constitute a major challenge for humankind. From the product design stage onwards, our underlying principle is "to not create, use or discharge environmentally damaging substances," and it is based on this idea that we develop new products. Furthermore, when it comes to conventional products that raise concerns about environmental issues, by being among the first to provide a substitute product and a reduction in the number of goods that are harmful to the environment, we are making a contribution to society.

## 3. Environmentally sound design in R&D



## 4. Development of environmentally conscious products

### Promotion of environmental conservation through the development of environmentally conscious products

Curbing global warming, dioxin reduction, VOC reduction and endocrine disruptor-free substances are some of the main environmentally conscious technologies we are developing. In addition, we are devoting our energy to developing an additive for biodiesel and an agent for soil remediation.

By developing and providing environmentally conscious products that make the most of original technology and ideas, we are tackling a diverse range of environmental problems.

## 5. Major environmentally conscious products

### Halogen-free flame retardants for plastics

The ADK STAB FP series are halogen-free flame-retardants for plastics, used in PCs, televisions, etc. Not only do they reduce the flammability of plastics, but they can also prevent the generation of harmful gases such as dioxins.



Flame retardant ADK STAB FP-2100

### Water borne Epoxy Resin / Water borne Urethane Resin

### ADEKA SAKURA-LUBE

### Antimony-free Photo-cationic initiators

### Environmentally Conscious Poly Vinyl Chloride Stabilizers for Electrical Cables and Rigid Items

Please see pages 5-9 of "CSR Report" for FY2008, where the four products listed above are covered in detail in a special feature.

# Logistics Environmental conservation and safety activities

## 1. Logistics Environmental conservation

### ■ Compliance with the revised Energy Conservation Law

Based on the coming into force of the Kyoto Protocol, which is concerned with preventing global warming, the Energy Conservation Law was revised in April 2006. Since ADEKA falls under the category of "specified shipper", it is obliged to submit an energy conservation plan and engage in energy conservation activities. As a result of implementing a policy to reduce the volume of CO<sub>2</sub> emissions in FY2008, the CO<sub>2</sub> emission volume arising from the transportation was 17,948t, and for the figure of "basic units of energy" obliged to be reduced by 1% per year, we achieved 1% reduction as compared to the previous year.

#### Figures for CO<sub>2</sub> emissions reduction measures

Item	Unit	FY2007	FY2008	Year-on-year
Volume of CO <sub>2</sub> emissions	t-CO <sub>2</sub>	19,887	17,948	90.2%
Amount of energy used	GJ *1	290,981	260,439	89.5%
(Crude oil equivalent)	kℓ	7,507	6,721	89.5%
Ton kilometer	1 million tons kilometer	158	143	90.5%
Basic units of energy *2		47.5	47.0	98.9%

\*1: GJ=Giga Joule (Unit of heat quantity)

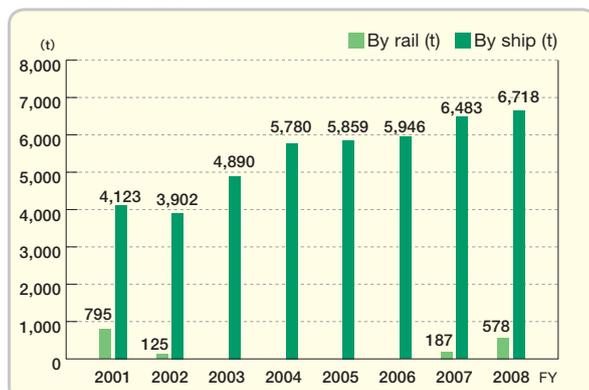
\*2: Basic units of energy = Energy consumption (Crude oil equivalent) divided by Ton kilometer

### ■ Promotion of modal shift

We are promoting a modal shift in our logistics, which consists of switching from the use of trucks to domestic cargo vessels and JR (Japan Railways) containers as a measure of the revised Energy Conservation Law.

In FY2008, the company has changed arterial transportation from its Chiba factory to the Kansai area, from truck-based transportation to that by container ship. In addition, we have promoted switching the arterial transportation of foods from truck to JR container.

#### Modal shift transition



\*1: The figures shown are the performance results of the switch from truck transportation to that by JR (rail) and ship.

Figures for goods that have been transported by JR and ship since before the statistics start (2001) have not been included.

## 2. Safety activities in logistics

### ■ Holding various kinds of meetings and conferences

By holding the National Safety Conference (twice a year) for cooperating transport companies, and the National SP ('stock point' = storage company) Conference (once a year each for chemical and food companies; twice a year in total) for cooperating storage companies, we are working on countermeasures to eliminate accidents.

#### 1. The National Safety Conference

In May and October of FY2008, the National Safety Conference was held, aimed at cooperating transport companies.

At the May conference there were 37 transport companies represented and 57 participants in attendance, while the figures for the October conference were 37 and 60 respectively. With "How to deal with trouble" as the theme, there were presentations from each company explaining the state of their accident prevention measures and activities, as well as discussions on measures to eliminate accidents.



A scene at the National Safety Conference



A scene at the National Safety Conference

#### 2. The National SP Conference

Aimed at cooperating storage companies, in June 2008 a Food Products SP conference was held, while November was the month for the Chemical Products SP conference. At the Food Products SP conference there were presentations on the efforts each storage company was making with regard to the Management Standards for Food Storage (AIB-compliant), established by ADEKA Logistics Corporation, as well as presentations on what happens when accidents/trouble occur, and preventive measures to counter them.

At the Chemical Products SP conference, there was a lively discussion among the storage companies about countermeasures against product damage.



A scene at the Food Products SP Conference



A scene at the Chemical Products SP Conference

### ■ Activities related to compliance with laws and ordinances

We set the "Compliance" as big theme and work to improve our duties. We requested our delivery and storage-entrusted companies to conduct the self-inspection of logistics-related laws and ordinances. Although serious violations of the law were not found, we directed the companies to improve their compliance.

# Chemical substance management

At the Chemical Substance Management Headquarters Committee, a policy for chemical substance management is drawn up, based on which each office and factory promotes its own activities.

## 1. Chemical substance policy

Our chemical substance management policy, drawn up at the Chemical Substance Management Headquarters Committee, is as follows.

1. **Environmental burden reduction**  
Prevent environmental pollution, reduce burden, promote waste recycling
2. **R&D**  
Promote research and development of products with low toxicity
3. **Legislative compliance**  
Comply with relevant national and international legislation
4. **Training of staff to ensure safe handling**  
Gather the latest information and take a thorough approach to safety management
5. **Provision and release of information, interaction with the local community**  
Publicly disclose management practices and engage in dialogue with the local community

## 2. Chemical substance management activities

In the area of chemical substance risk assessment, ADKEA participates in the Chemical Control Law 'Japan Challenge Program'<sup>\*1</sup> (a program for the gathering and transmission of safety information on existing chemical substances, a joint initiative between government and industry), as well as safety tests for high production volume (HPV) chemical substances, an initiative of the International Council of Chemical Associations (ICCA) within the framework of the OECD's international efforts. The company also takes part in activities such as the Long-Range Research Initiative (LRI), regarding the effects that chemical substances have on people's health and the environment.

### ■ Japan Challenge Program (beginning in June 2005)

HPV substances	Progress
Bisphenol-A propylene oxide adduct (ADEKA POLYETHER BPX-11)	Consortium <sup>*2</sup> set up, activities underway
Condensed phosphoric acid ester series flame retardant (ADK STAB FP-600, 700)	Consortium set up, activities underway

### ■ ICCA-HPV testing program

HPV substances	Progress
Hydrogen peroxide	SIAM <sup>*3</sup> completed (SIAM9)
Tris 2-ethylhexyl trimellitate (ADK CIZER C-8)	SIAM completed (SIAM9)
Ammonium persulfate, potassium persulfate, sodium persulfate	Attended a technical conference in Belgium in July 2004 SIAM completed (SIAM20)
Sodium percarbonate	SIAM completed (SIAM20)
Bumetrizole (ADK STAB LA-36)	Transition from the Japan Challenge Program Consortium set up, activities underway

<sup>\*1</sup> **Chemical Control Law Japan Challenge Program:** FA joint initiative between government and industry, this is a program for the gathering and transmission of safety information on existing chemical substances. The list of substances covered by Japan's own HPV safety tests, which specialize in low molecular organic compounds, is now even more comprehensive, with 166 substances deemed as priority information gathering substances.

<sup>\*2</sup> **Consortium:** FA gathering of companies, or groups, involved in the manufacture of the same substances.

<sup>\*3</sup> **SSIAM (SIDS Initial Assessment Meeting.** 'SIDS' is the Screening Information Data Sheet): FA initial assessment meeting within the OECD, held to determine the potential hazardousness of existing chemical substances.

### ■ Setting up and training the Chemical Substance Management Committees

Chemical substance management committees have been set up in six factories and three R&D labs, all of which carry out study and training on chemical substances.

Instructors are sent out from the environmental conservation and quality assurance departments to give talks and lead study sessions.

### ■ Chemical substance export management

With the expansion in the export of chemical products, we operate an "Export regulation-compliant shipping system."

In the area of chemical exports, we need to comply with our own domestic legislation (export trade control ordinances), as well as with the rules and regulations of the nation we export to. International enforcement of legislation has become very strict, due to regional conflicts and terrorist attacks. We have established a reliable computer system that employs a comprehensive system of inspections at the shipping preparation stage.

In FY2008, tributyltin compound was added to chemical substances listed in Rotterdam Treaty Appendix III in October. Ordinal dibutyltin compound contains traces of tributyltin compound. As this is targeted for item 35 - 3 - (1) of Export Trade Control Order Appendix 2 from February 1, 2009, we have done our best to keep our customers informed about this matter.

### ■ Compliance with 'REACH'

REACH<sup>\*4</sup>, Europe's new chemical product regulation, came into force on 1 June 2007, becoming operational on 1 June 2008. The regulation requires that management be carried out through a supply chain of shared information, from upstream users to those downstream. In addition, risk management has also become a requirement, and by anticipating different exposure scenarios for each kind of application, users now have to carry out a risk assessment appropriate for each scenario. The preliminary registry has been completed on December 1, 2008.

In order to approach this new legislation with a comprehensive system in place, we have set up a study committee within the company and are working hard with our REACH efforts.

<sup>\*4</sup> **REACH (Registration, Evaluation and Authorization of Chemicals):** The generic name given to a comprehensive chemical substance management system in the EU. REACH is made up of four procedures: registration, evaluation, authorization and restriction. Unlike previous regulations, it does not make a distinction in its legislation between existing chemical substances and new ones, and it also includes chemical substances included in finished products.

# Environmental accounting

## 1. Calculation methods and guidelines

The calculation methods and guidelines used in environmental accounting are described below.

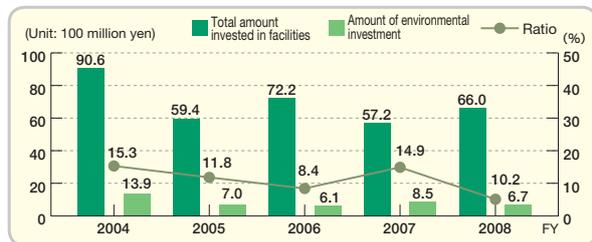
1. In adopting the Ministry of the Environment's Environmental Accounting Guidelines 2005, released in February 2005, its Environmental Conservation Cost Category Handbook 2003, as well as the Japan Chemical Industry Association's Environmental Accounting Guidelines for Chemical Companies, we attach great importance to reliability, comparability and verifiability.
2. "Deemed effect" and "risk avoidance" are not included in calculations.
3. Depreciation is taken into account based on statutory straight-line depreciation. The economic effect occurring during the five-year period of depreciation is taken into account.
4. The economic effect of the following has been included in the accounts: income acquired through recycling, cost reduction through energy conservation, the reduction of waste disposal costs resulting from recycling, and the reduction of logistical costs due to transport efficiency and cutting down on raw materials.

## 2. Summary of FY2008

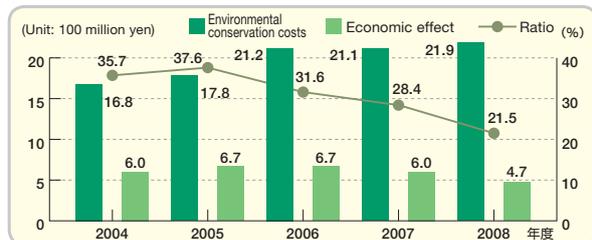
Out of a total of 6,600 million yen invested in the company's facilities in FY2008, 670 million yen went on environmental investment, representing 10.2% of the total amount spent on facilities.

Environmental conservation costs stood at 2,190 million yen, while the resulting economic effect was 470 million (21.5% of the total).

### Environmental investment amounts and ratios



### Environmental conservation costs and economic effect



## 3. Environmental accounting results

### Environmental accounting results

Companies covered: ADEKA and domestic Group companies  
Accounting period: April 1, 2008 ~ March 31, 2009

Category		Environmental accounting results		Relevant page	
		Scope of main activities	Unit: 1 million yen		
			Amount invested	Cost	
(1) Costs within each business area		Cost of environmental conservation in order to reduce environmental burden	665	1,998	—
Breakdown	① Pollution control costs	Maintenance of air/water pollution, soil contamination and noise pollution prevention facilities, levies	325	1,162	26
	② Global environmental costs	Maintenance and management of facilities to prevent global warming (energy conservation) and ozone layer depletion	294	325	29~30
	③ Resource recycling costs	Measures to save resources, such as industrial waste reduction and recycling	46	511	27~28
(2) Upstream/downstream environmental burden reduction costs		Collection of containers and packaging, recycling costs, green procurement	0	17	28
(3) Cost of management activities		Environmental education, ISO compliance, analysis and measurement costs, tree-planting etc., weed eradication	1	106	30
(4) R&D costs		Costs arising from environmental conservation-related research and development.	0	63	31
(5) Social activity costs		Tree-planting etc., weed eradication, information dissemination costs, association contribution fees	0	1	17~18
(6) Environmental damage costs		Soil contamination etc, natural restoration	0	4	—
		<b>Total</b>	<b>666</b>	<b>2,189</b>	<b>—</b>

## 4. Greenhouse gas reduction costs

The cost required to reduce 1 ton of greenhouse gases was 59 thousand yen. This represents a reduction of 53 thousand yen / ton compared to the FY2007 figure of 112 thousand yen / ton. This amount includes the reduced depreciation cost per ton arising from pre-existing investment in facilities.

## 5. Future direction

Based on "Environmental Accounting Calculation Standards," we will further improve the calculation accuracy of each office and factory through internal verification. Furthermore, by introducing encoding, we aim to make accounting operations more efficient.

# CSR activities of Group companies

## ■ Adeka Chemical Supply Corp.

Description of business: Sale of chemical products. Development, production, and sale of metal processing oils etc.

- 1. Goods complied with the green mark and eco mark for stationery items**  
Out of a total of 229 items, 185 eco items (1%) were procured to achieve the goal. In FY2009, we continue to aim to achieve a procurement rate of over 80%.
- 2. Implementation of energy conservation campaign in company offices**  
Summer "Cool Biz" was conducted. Winter "Cool Biz" will be also conducted for the current year.
- 3. Compliance with laws and ordinances**  
We will carry out thorough compliance led by the compliance committee.

## ■ Adeka Clean Aid Corp.

Description of business: Development and sale of detergents for commercial kitchens and industrial detergents.

- 1. Expansion of the range of crushable containers**  
This container is adopted in 70% of 5kg products.
- 2. Introduction of pouch container**  
To reduce the waste, this was adopted in 5 items (1 item within this year).
- 3. Reuse of poly containers**  
The number of containers that are reused has exceeded 100,000 per year, and this contributes to waste reduction and environmental conservation.
- 4. Compliance with the Industrial Health and Safety Law and GHS**  
We created a MSDS for industrial detergents in compliance with GHS.
- 5. Sales of environmental aid products**  
We have started to sell the oil trap and collection equipment for grease traps.

## ■ Adeka Fine Foods Corp.

Description of business: Manufacture and sale of dressing and processed fishery products.

- 1. Energy conservation efforts**
    - We have promoted energy conservation by controlling the number of operating days for each production line and reduced electric power by 44,950kw (4.0%) over the year through better control of the operation hours of freezers (cutting 39 days per year).
    - We carried out small measures including the checking of steam traps as a measure towards reducing the volume of Bunker A oil and performing the inspection and repair of steam leakage.
  - 2. Continuing the zero emissions**
    - Sludge (mayonnaise sachets) is incinerated and thermally recycled. Product standard (sachet product) are reviewed and improved to reduce the amount. The test for improving the film material is being promoted as a measure against generation source.
    - Waste plastic, wood and paper debris are compressed and solidified, and recycled as fuel. To prevent generation of waste plastic, we are performing the test of changing the weighing of raw materials (using plastic bag) in previous day into the weighing (using SUS container) on the day.
    - Drained sludge and general sludge (mayonnaise) continue to be used as compost. In FY2008, a 24% reduction was achieved as compared to the previous year.
  - 3. Stationery and non-stationery eco products**
- | FY     | No. of relevant items | No. of items changed | Procurement rate (%) |
|--------|-----------------------|----------------------|----------------------|
| FY2008 | 112                   | 78                   | 69.6                 |

## ■ Adeka Engineering & Construction Corp.

Description of business: Design, construction, construction management, and maintenance of equipment and plants, environmental clean-up activities

- 1. Environmental clean-up activities**  
We are conducting soil and groundwater clean-up activities, and water recycling activities. As a research institute designated by the Ministry of the Environment, we are conducting consistent activities inspecting soil pollution and conducting groundwater clean-up construction.
- 2. Soil and groundwater clean-up activities**  
To clean up soil and groundwater contaminated with harmful chlorinated volatile organic compounds, we provides a variety of technologies such as our own technology "Photocatalytic method", "Conventional anaerobic microbial method", "Chemical oxidation method" with peroxide used. Especially, the method of cleaning up the soil and groundwater using the conventional anaerobic microbial maintains the leading share in the market.
- 3. Water recycling activities**  
We are developing and distributing the technology to clean up and reuse drainage water discharged from metal plating factory and circuit board production processes by utilizing the newest technology like RO film.
- 4. Rainwater drainage**  
Because the water drainage discharged from the airport runway is contaminated, we proceed to completely clean up the water drainage through microbial FM film and RO film, which is to be recycled as air-conditioner water in the airport. Consistent from plan, design, construction, and operation, this process is highly evaluated.
- 5. Next generation technology**  
We are aggressively developing the environment-related technology of recycling the drainage water discharged from metal plating factory and circuit board production process by utilizing the RO film.



Soil and groundwater clean-up activities: Processing work involving microbial agent infusion

## ■ Oxirane Chemical Corp.

Description of business: Manufacture and sale of epoxy plasticizers and acetic acid conductors.

- 1. Safety**  
We proceed with three daily activities of "Declaration of Safety by Saying", "J Card Campaign", and "HK Card Campaign", and Process KY and PHA (Process-Hazard-Analysis) activities. In FY2008, we achieved no accident perfectly.
- 2. Wastewater treatment facility**  
To reduce the burden to the surrounding environment, we changed the discharging of wastewater to rivers into the discharging to public sewage.
- 3. Energy conservation activities**  
We achieved a crude oil reduction equivalent of 20kl. In addition, we are all working to enhance the productivity and reduce the basic units of utilities through minute improvement.



Major manufacturing plant



Introduction of energy-saving vacuum pump

### ■ Adeka Foods Sales Corp.

Description of business: Sale of edible oil & fats, and ingredients for confectionery, bakery and other food-related industries.

#### 1. Promotion of the introduction of low-emission vehicles

We have completed the replacement of 25 out of a total of 29 business vehicles, and these are now the low-emission type. As for the remaining 6 vehicles, with the lease contract having come to an end, we are considering making the switch over to low-emission models.

#### 2. Health promotion measures

We separated the smoking area and nonsmoking areas on the floor in order to reduce exposure to secondhand smoke. We conduct easy gymnastic exercises in every morning meeting.

#### 3. Implementation of energy conservation campaign in company offices

We continue to be committed to conserving energy and make a concerted effort to adjust temperature controls.

#### 4. Continuing to use products bearing the eco mark and recycled products

We have finished making the switch to using recycled paper for photocopy paper in the previous year, and are now actively trying to use the reverse side of paper. When using the printer, we actively try to perform double-sided printing. In addition, we are also promoting the procurement of stationery products that carry the green mark.

#### 5. Sorting out the rubbish

We are promoting sorting out of the rubbish and also reduction of amount of rubbish generated by re-using the reverse side of papers in printing.

### ■ Adeka Logistics Corp.

Description of business: Logistics control for Adeka Corporation, warehousing

#### 1. Energy conservation measures (CO<sub>2</sub> reduction measures)

Promoting a modal shift by, for example, making a switch from truck transportation to container ship and JR containers, we are implementing policies to reduce the volume of CO<sub>2</sub> emissions by 1%. In FY2008, the transportation of chemical products from the Chiba factory to the Kansai area was switched from truck to container ship, and the transportation of foods from metropolitan SP (stock point) to local SP was switched from truck to JR container.

#### 2. Establishment of management standards for food storage, and inspection of food and other product storage facilities

To secure the Food Safety and Security, we have established and put into effect Management Standards for Food Storage, which comply with the inspection standards of the AIB's Consolidated Standards for Food Safety. In FY2008, we implemented the inspection of main food SP. From now on, we will conduct the inspection once a year.

### ■ Yongo Co., Ltd.

Description of business: Edible oil & fats, Yeast, Filling, basic ingredients for bread, and others

#### 1. Strengthening the stock management

We updated the computer system to strengthen the stock management, and then reduced the disposal by approximately 30%.

#### 2. Environmental measures

We started the recycling of papers (magazine, copy paper, envelope, etc.) that have so far disposed as burnable trash. (Cardboard boxes are 100% recycled since before) By cutting PP bands that occupy most of plastic rubbish, we achieved large reduction of the volume.

#### 3. Future plans

By removing unwanted substances, we will expand the storage spaces, improve working environment, and reduce the product damages. By performing the inventory data management, we will actively reduce the product disposal.

### ■ Tokyo Environmental Measurement Center Co., Ltd.

Description of business: Environmental studies of air and water quality, and study/analysis of occupational hygiene.

#### 1. Soil contamination study and atmospheric environment study

Conducting the study and analysis based on Soil Contamination Countermeasures Act and studying atmospheric environment along the roads, we will endeavor to contribute to maintaining and improving the accuracy, and building up safe society.

#### 2. Eco activities

Confidential documents are sent to paper manufacturers, where they are used to make recycled paper. (FY2008 result: 672kg) And, we encourage all our related companies to collect plastic bottle caps as a measure to reduce CO<sub>2</sub>.

#### 3. Company vehicles

When we upgraded the fleet, we chose models that had low fuel consumption. And, we will study the introduction of compact vehicles in the future.

### ■ Uehara Foods Industry Co., Ltd.

Description of business: Manufacture and sale of basic ingredients for confectionery and bread, and retort-packed foods.

#### 1. Separation of smoking areas

Along with enforcement of Health Promotion Law, we have helped prevent the spread of secondhand smoking by designating the smoking area in the factory to the corner of the office. However, further these measures, we have prepared new smoking rooms. Closing the door when smoking increased the smoking separation effect. In addition, setting a limit to smoking break times (the rule being three minutes for each smoke break) helped to improve the employee moral.



Separate smoking room

#### 2. Updating the hand dryer to new type

Considering the public health, environment, and convenience, we newly updated the hand dryers installed at the entrance, working site, and toilets in the factory. We reviewed the locations to be installed and reduced the number of the unit from 10 to 6, thus reducing the cost.



Hand dryer

#### 3. Abolishment of disposable chopsticks

We abolished the use of disposable chopsticks for around 90 of our employees who eat lunch in the factory. We asked the box lunch delivery agent to prepare plastic chopsticks for each lunch box and asked the employees who carry their own lunch box to use their own chopsticks, in order to reduce the burning trash.



My chopsticks

# Economic Reports



In FY2008, our group business was affected by a raw material price increase, a large and rapid decrease of demand and an inventory adjustment caused by a simultaneous worldwide recession. The business environment surrounding us is expected to continue to remain in a severe condition due to economic uncertainty.

Under this situation, our group will endeavor to promote possible cost reductions and business efficiency, fortify our company quality in a manner that can respond to changing business environment, and develop competitive products in growing fields, in order to improve our business in next term.

To raise our business effectively and efficiently, secure the compliance and reliability of financial reports, and preserve assets, we will also improve and fortify our internal control system and endeavor to strengthen corporate governance, in order to raise our business stability and transparency furthermore.

**Haruhiko Tomiyasu**, Director and Operating Officer, Legal Affairs & Publicity Department and Finance & Accounting Department, Chairman of Internal Control Promotion Committee

## Overview of Account Settlement for the Current Term

### Consolidated Results for the 147th Term

(April 1, 2008 to March 31, 2009)

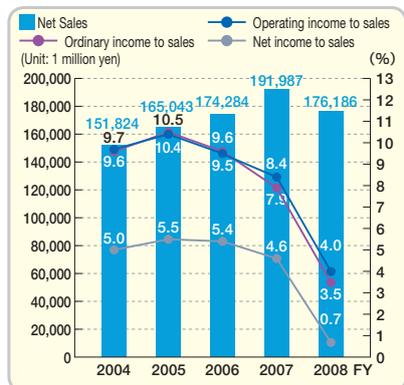
Due to the rising of crude oil prices and resources in first-half term, rapid decrease of overseas demands and inventory adjustment at home and abroad caused by a worldwide recession triggered by the U.S. financial crisis, our country's economy in this term has been rapidly worsened since the second-half term.

To respond to such rapidly changing business environment, our group has expanded new products strategically, and implemented emergency measures for thoroughgoing cost reduction, restraint of capital investment, compression of

inventory, and reduction of fixed costs. However, our business has been largely affected by the dramatic decline in the demand for automobile, IT and digital appliances, etc. that are our main business target, and exchange rate fluctuations.

In terms of the results for this term, earnings amounted to 176,186 million yen (a decrease of 8.2% from the previous term), operating earnings were 6,989 million yen (a decrease of 56.9% from the previous term), and current earnings were 6,107 million yen (a decrease of 59.8% from the previous term). In addition, the current net earnings amounted to 1,223 million yen (a decrease of 86.0% from the previous term) due to posting an extraordinary loss including impairment loss and loss on revaluation of investments in securities.

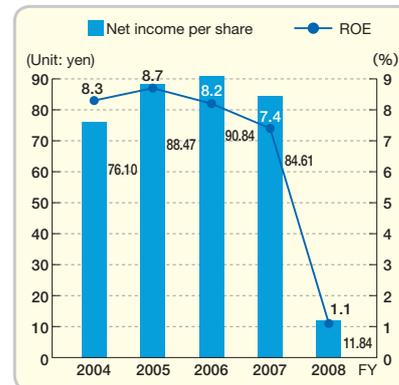
Net Sales, Operating income to sales, Ordinary income to sales, Net income to sales (Consolidated accounting)



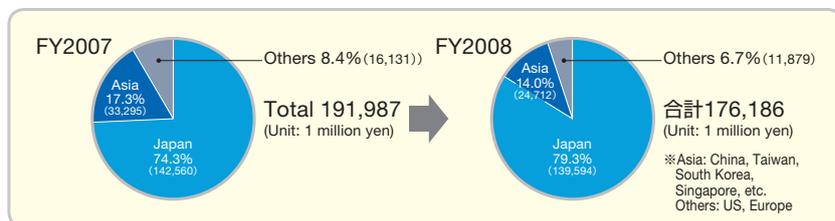
Operating income, Ordinary income, Net income (Consolidated accounting)



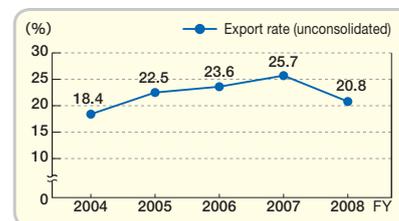
Profitability (Net income per share, return of equity [ROE]) (Consolidated accounting)



Geographical (Consolidated)



Overseas sales rate (Consolidated)



## Third party opinion comments



### Read the "ADEKA group 2009 CSR Report"

**Katsuhiko Kokubu** Professor, Graduate school of Business Administration

Professor Katsuhiko Kokubu received a Ph. D in business administration from Osaka City University. He has been a professor at the Graduate School of Business Administration, Kobe University since 2001, and in 2003 established the Institute for Environmental Management Accounting, a vehicle for utilizing research achievements. Professor Kokubu chaired a committee of the Ministry of Economy, Trade and Industry on development and promotion of material flow cost accounting and served as a member of a committee of the Ministry of the Environment on environmental reporting guidelines.

#### **ADEKA's CSR as DNA**

In ADEKA group, CSR policy is included in the founding mentality and two management policies. The policy of contributing towards society through the core business is highly evaluated. To achieve this policy, ADEKA group CSR Five Year Plan is formulated. As FY2009 is located at the midpoint of the CSR Five Year Plan, I expect you to review the past activities and enhance these activities in the second half of the term.

#### **Challenges for taste, safety, and health**

Special topics corner in current year report has introduced two products, which were developed based on the brand slogan of ADEKA food business "Best Partner for Taste and Safety" and the theme of taste, safety, and health. The product features are introduced and the descriptive content is enriched to help the reader easily understand. I believe that in addition to introducing these activities as special topics, it is desirable for you to place such activities in ADEKA's CSR activity structure and continue to disclose the information.

#### **CSR objectives**

In "ADEKA Group's CSR Objectives" in current CSR report, strengthening the communication with stakeholders and focusing on "Energy", "Environment", and "Life Science" fields, are described. For these

objectives to lead to practical activities it is necessary to divide such objectives into more specific targets. In addition, distinction of core business and CSR seems to not be clearly shown. If you show the CSR significant social contributions through your core business it will allow you to convey a strong message within and outside of your group.

#### **Environmental Reports**

ADEKA sets quantitative target and aggressively promotes environmental conservation activities. In particular, the CO<sub>2</sub> emissions reduction target set to 10% over the FY1990 has finally been achieved, which is highly evaluated. I hope you will aggressively promote improving your corporate values through environmental conservation activities. To that end, it is effective for you to set the environmental target from a long-term view and conduct the entire evaluation using comprehensive environmental efficiency index.

#### **Strengthening the communication with stakeholders**

Regarding the CSR objectives, it is important for ADEKA to deepen the relationship with its stakeholders. The ADEKA group is asked to recognize the issues demanded by society and work to solve such issues through having aggressive dialogue with such stakeholders. I expect you will make an effort to build up mutual communication with the stakeholders.

### **A third party opinion**

**Haruhiko Tomiyasu**

Director and Operating Officer, Legal Affairs & Publicity Department and Finance & Accounting Department, Chairman of Internal Control Promotion Committee

In the current report, we tried to highlight "Food" which is another core business following the environmentally conscious products in the chemical business which was highlighted in the previous report. In this topic, we tried to show our attitude of providing safe food to customers and our policy of contributing to society through our business.

To fortify the communication with our stakeholders set as ADEKA group's CSR objective it is important for us to build up mutual communication, as pointed out by Professor Kokubu, and raise the awareness about CSR throughout ADEKA group companies, and continue to produce various opportunities for having aggressive dialog with such stakeholders.

Concerning environmental problems we are challenging as important issue, we will make more efforts to promote environmental conservation activities with higher consciousness. In consideration of such suggestions, we will set the CSR policy of FY2009 target in ADEKA group's CSR Five Year Plan, and aggressively promote our CSR activities despite severe business environment.

## List of Offices and Factories

### Domestic

#### Offices

##### Head Office

7-2-35 Higashi-ogu, Arakawa-ku, Tokyo 116-8554

##### Osaka Main Branch

4-2-21 Minami-Honmachi, Chuo-ku, Osaka-shi, Osaka 541-0054

##### Nagoya Branch

1-20-12 Meieki Minami, Nakamura-ku, Nagoya-shi, Aichi 450-0003

##### Fukuoka Branch

3-22-8 Hakata-ekimae, Hakata-ku, Fukuoka-shi, Fukuoka 812-0011

##### Sapporo Regional Office

3-1-47 Kitasanjo-Nishi, Chuo-ku, Sapporo-shi, Hokkaido 060-0003

##### Sendai Regional Office

2-3-20 Ichiban-cho, Aoba-ku, Sendai-shi, Miyagi 980-0811

##### Okayama Office

1-4 Ekimotomachi, Kita-ku, Okayama-shi, Okayama 700-0024

#### R&D Laboratories

##### Ogu R&D Laboratory

7-2-34 Higashi-ogu, Arakawa-ku, Tokyo 116-8553

##### Urawa R&D Laboratory

5-2-13 Shirahata, Minami-ku, Saitama-shi, Saitama 336-0022

##### Kuki R&D Laboratory

20 Showanuma, Shoubu-machi, Minami-saitama-gun, Saitama 346-0101

##### Kansai Food Development Section

2-6-8 Hon-cho, Chuo-ku, Osaka-shi, Osaka 541-0053

##### Nagoya Food Development Section

1-20-12 Meieki Minami, Nakamura-ku, Nagoya-shi, Aichi 450-0003

#### Factories

##### Kashima Factory

Touwada 29, Kamisu-shi, Ibaraki 314-0102

##### Kashima Factory-West

Higashi-Fukashiba 5, Kamisu-shi, Ibaraki 314-0103

##### Chiba Factory

Kitasode 3-1, Sodegaura-shi, Chiba 299-0266

##### Mie Factory

Toincho Yamada 3701-1, Inabe-gun, Mie 511-0251

##### Fuji Factory

Fujioka 580, Fuji-shi, Shizuoka 417-0841

##### Akashi Factory

Inamicho Rokubun-ichi 1183-15, Kako-gun, Hyogo 675-1112

##### Soma Factory

1-1-1 Koyo, Soma-shi, Fukushima 976-0005

#### Major Affiliated Companies

Nihon Nohyaku Co., Ltd.

Adeka Chemical Supply Corp.

Adeka Life-Create Corp.

Asahi Architects Office Co., Ltd.

Oxirane Chemical Corp.

Kashima Chlorine & Alkali Co., Ltd.

Kashima Chemical Co., Ltd.

Kanto Sodium Silicate Glass Co., Ltd.

Adeka Clean Aid Corp.

Tokyo Environmental Measurement Center Co., Ltd.

CO-OP Clean Co., Ltd.

Mizushima Plasticizer Co., Ltd.

Nihon Epoxy Resin Co., Ltd.

Adeka Fine Foods Corp.

Adeka Engineering & Construction Corp.

Adeka Logistics Corp.

Adeka Foods Sales Corp.

Yongo Co., Ltd.

Uehara Foods Industry Co., Ltd.

### Overseas

#### USA

Amfine Chemical Corp.

Adeka USA Corp.

#### Germany

Adeka Europe GmbH

#### France

Adeka Palmarole SAS

#### South Korea

Adeka Korea Corp.

#### China

Adeka (Shanghai) Co., Ltd.

Adeka Fine Chemical (Shanghai) Co., Ltd.

Adeka Fine Chemical (Changshu) Co., Ltd.

Adeka Foods (Changshu) Co., Ltd.

Chang Chiang Chemical (Shanghai) Co., Ltd.

Kukdo Chemical (Kunshan) Co., Ltd.

#### Taiwan

Chang Chiang Chemical Co., Ltd.

Adeka Fine Chemical Taiwan Corp.

#### Thailand

Adeka Fine Chemical (Thailand) Co., Ltd.

#### Malaysia

Felda Oil Products Sdn. Bhd.

#### Singapore

Adeka (Singapore) Pte. Ltd.

Adeka (Asia) Pte. Ltd.

#### India

Adeka India Pvt. Ltd.



Address of the publisher and for inquiries:

〒116-8554 7-2-35 Higashi-ogu, Arakawa-ku, Tokyo 116-8554, Japan

Legal Affairs & Publicity Department, ADEKA Corporation

Tel. +81-3-4455-2803 Fax. +81-3-3809-8210 E-mail: somu@adeka.co.jp

<http://www.adeka.co.jp>



This CSR Report uses soy ink.

