

Health, Safety, Environmental Protection and Quality Assurance Initiatives

The Nippon Kayaku Group engages in a wide range of health, safety, and quality assurance activities.

We conduct a safety screening whenever we institute new work flows or changing facilities and existing work flows, in order to prevent accidents, injuries or environmental accidents from happening. As part of our efforts, we also conduct risk assessments to ascertain inherent risk factors.

We have also created a database of troubles we have experienced in terms of our environmental protection, safety and quality assurance initiatives that is used across all of our workplaces. Central integrated reviews (environment, health and safety/quality reviews) are conducted on our workplaces and certain Group companies.

Health and Safety Initiatives and Results

The Nippon Kayaku Group takes a systematic approach to eliminating accidents and injuries in the workplace. As a result of our efforts, in fiscal 2011 there were a total of only three no-lost worktime accidents and one lost worktime accident.

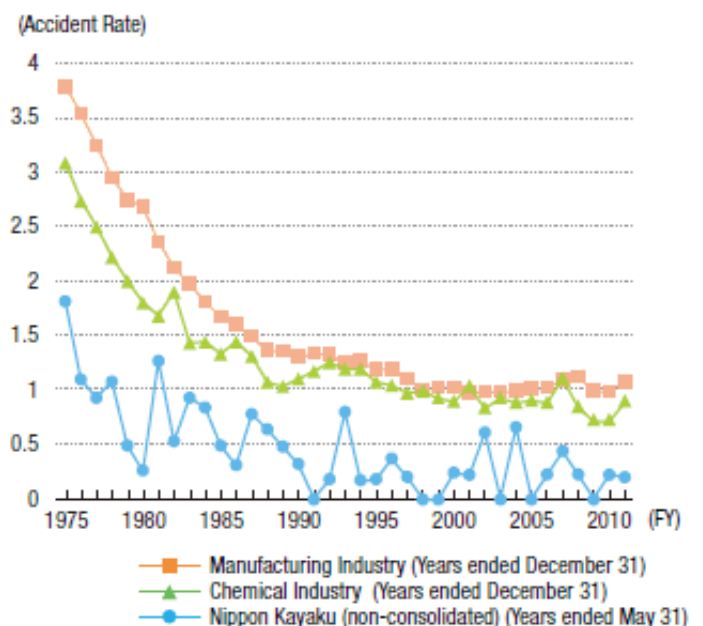
In terms of traffic safety, there were 42 traffic accidents involving company-owned vehicles, representing an increase of 20 compared to last fiscal year. As a result, we will continue with safe driving reviews of our MRs using a camera-equipped drive recorder as well as assure safer driving habits by combining these reviews with a driving aptitude test approved by the National Police Agency.

We are also working to share safety awareness across different workplaces by distributing work flow checklists to help eliminate shortcuts or omissions, having employees issue a safety declaration to prevent shortcuts and omissions, as well as displaying this safety declaration clearly in each workplace.

Fiscal 2011 Safety Targets and Performance

Items	Target	Actual
Major Injury / Accidents	0	0
Serious environmental accidents	0	0
Lost worktime accidents	0	1 cases
Accidents not accompanied by lost worktime	Rate of lost worktime accidents*1 of under 1	0.56
	Less than 5 cases	3 cases
Work-related automobile collisions	Less than 3%	10.5 %
	Less than 12 cases	42 cases
Non-injury workplace accidents	0	0

Rate of Lost Worktime Accidents



*1 Rate of lost worktime accidents: The number of lost worktime accidents that occur in every 1 million work hours.



Award presentation ceremony

Kashima Plant Receives Award from the Minister of Health, Labour and Welfare

On October 5, 2011, Nippon Kayaku's Kashima Plant was presented with a Fiscal 2011 Excellence Award from Japan's Minister of Health, Labour and Welfare. This award is given to business sites that are recognized among their peers in Japan for excellence in health and safety initiatives. Nippon Kayaku's Kashima Plant was one of six business sites in Japan to receive this honor.

This award recognizes the Kashima Plant for its daily safety activities and for achieving 10,000 consecutive operating days without a workplace accident since opening on December 1, 1982. We are committed to promoting an even stronger safetyfirst mentality at our plants by combining the Kashima Plant's culture of safety with new safety activities.

Initiatives to Enhance Quality Assurance Functions

In order to promote training on and the percolation of quality management technologies, we send employees to participate in external lectures, hold group training sessions on statistical calculation methods, and conduct onsite presentations at our plants on the seven tools of quality control and other themes. Additionally, we publish a compilation of quality improvement case studies and seek to encourage greater use of statistics to improve quality, such as the experimental design method.

We also hold practical training programs that promote actual operational improvements or reform based on the challenges faced by individual workplaces. In fiscal 2011, this training program was held at the Fukuyama Plant under the theme "Fukuyama Plant – Good Manufacturing Practices".

Occupational Health and Safety as well as Quality Assurance Initiatives

1. Safety and Quality Assurance Activities at Work Sites

We are undertaking a wide range of safety and quality assurance activities.

Safety Activities	Quality Assurance Activities
◦ Risk Assessment	◦ Quality Risk Assessment
◦ 5S Activity*2	◦ Quality Patrol
◦ Hiyari Hatto Activity	◦ Trend Management (Visualization)
◦ KYT Activity	◦ Campaign to Prevent the Reoccurrence of Quality Problem
◦ TPM Activity*3	◦ Quality Technology Training

*2 5S Activity: An acronym of five Japanese words phonetically starting with the letter "S".

*3 KYT Activity: Kiken Yochi Training Activity (Danger Prediction Training Activity).

2. Conducting Safety Assessments (Risk assessment, understanding potential risk factors)

Each of our business sites implements risk assessments. Risk factors in chemical reactions are analyzed primarily based on HAZOP.*4

*4 HAZOP: Hazard and Operability Study. A safety evaluation methodology used at chemical plants. Potential hazards associated with chemical reactions can be comprehensively extracted for evaluation.

Risk Assessment Training at the Takasaki Plant

At our Takasaki Plant we systematically conduct training programs based on age, rank and job type in order to enhance employee knowledge, skills and qualifications. As part of the plant's safety training regimen, a risk assessment course is held for mid-career employees. Risk assessments are an important safety tool used as part of the plant's health and safety activities. Each year training course curriculum is modified to enhance quality and understanding. Enhancing the knowledge and skill sets of mid-career employees is extremely important to heightening the entire plant's level of safety. The Takasaki Plant will continue to hold training on not only risk assessments, but also relevant laws and safety to upgrade the entire plant's awareness and prevent accidents.

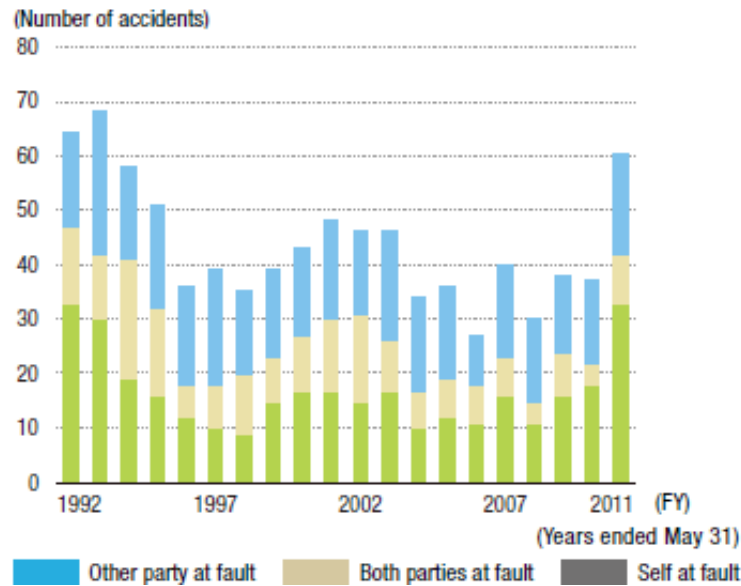
3. Elimination of Shortcuts and Omissions

Accidents that have occurred within the Nippon Kayaku Group in recent years have tended to result from shortcuts or omissions. As a result, the Nippon Kayaku Group is working to share safety awareness across different workplaces by distributing work flow checklists to help eliminate shortcuts or omissions, having employees issue a safety declaration to prevent shortcuts and omissions, as well as displaying this safety declaration clearly in each workplace.

4. Traffic Safety Initiatives

Many Nippon Kayaku Group employees use automobiles on a daily basis for both work and commuting purposes. Our average rate of work-related traffic accidents to date is one-third the industry norm of the Japan Pharmaceutical Manufacturers Association, but there were a total of 42 work-related automobile accidents in fiscal 2011, resulting in a 10.5% accident rate, almost double that of the previous year. In order to further reduce traffic accidents, we have conducted a safe driving review of our MRs that combines a driving test approved by the National Policy Agency with a camera-attached drive recorder.

● Work Related Traffic Accidents



5. Promoting Health Management

Our employees undergo regular health checkups as well as special physical examinations because chemical substances are regularly handled on the job. Employees meet with an industrial physician following their regular health checkup to receive guidance and instructions on their health management and awareness. We also manage a database of information on the hazardous properties of chemical substances and utilize this information to prevent work related illnesses.

6. Deployment of AEDs

Nippon Kayaku has provided automatic external defibrillators (AEDs) to its plants, business sites and head office. Employees also regularly participate in internal CPR training sessions and external lectures in order to prepare for incidents of sudden cardiac arrest.

Responding to Accidents and Disasters

1. Fire response

Each business location is equipped with a fire truck, fire hydrant, and fire extinguisher for chemical substances in preparation for potential fire hazards. In addition to holding on-site training, employees also participate in local fire fighting competitions at which they have achieved strong results.

2. Natural disaster response

As a precaution for earthquakes and other natural disasters at each workplace, we have compiled and distribute the Employee's Handbook of Disaster (Earthquake) Prevention to each and every employee. This handbook contains instructions on emergency response when an earthquake occurs, how to make contact and confirm one's safety, and alternative methods to reach home when public transportation is unavailable.

Employee safety during a disaster is monitored by a safety reporting and communication system that uses email. As an earthquake strikes, the disaster response headquarters will send out an instruction by email to all employees. Employees can reply to the email by a simple touch of a button, which allows data to be collected. This system will be used to confirm employee safety during an earthquake of a seismic intensity of 6 or higher in Japan.

Management of Chemical Substances

1. Accident Prevention Measures for Spills during Shipment

The Yellow Card System

Whenever hazardous chemicals are transported, we require the driver of the vehicle to carry a Yellow Card*6 as a precautionary measure for emergency situations.

*6 Yellow Card: One of the voluntary activities proposed by the Japan Chemical Industry Association. A card that provides emergency instructions to the truck driver or any emergency service personnel who is at the scene of an accident that may occur during transport of chemical substances or high-pressure gases. The term "Yellow Card" comes from the color of the card.

Transportation of Chloropicrin

Chloropicrin is a highly irritant agrochemical which we transport with the utmost care. As a precaution against accidental spills, we stock emergency chemical-spill supplies at our business locations nationwide in Japan and conduct regular training. We have also concluded mutual support agreements with the members of the Japan Chloropicrin Manufacturers Association to collaborate during an emergency response.

Being Prepared for Chemical Spills

We have predetermined procedures in place that prepare us for a possible hazardous chemical spill, and conduct training to practice these procedures, including the use of self-contained compressed-air breathing apparatuses.

2 Collection of Chemical Substance Data

Since 1990, we have accumulated data on the risks of raw materials, intermediates, and products manufactured and used by our

company to ensure proper and safe handling of these chemical substances. This database can be accessed through our company's internal network.

3. Controlling Hazardous Substances

Controlling Hazardous Substances in Research Laboratories using a Tag System

The Integrated Research Building and Agrochemicals Laboratories have introduced a tag system*7 to properly manage hazardous substances found on site, as our research laboratories handle a wide variety of dangerous chemicals including reagents and catalysts. The system affixes an IC tag to all hazardous chemical containers to identify degree of danger and quantity as a means to promoting safety and efficiency.

*7 Tag system: A system of managing hazardous substances where a tag is affixed to the container that identifies the stored quantity as a score.

Management of Hazardous Materials at Our Plants

The receipt and shipment of goods, including raw and intermediate materials, is managed at each of our plants using a computer. This system allows us to track hazardous material volume for each storage location. In the event of a fire, the system can provide an accurate count on the quantity of hazardous substances stored on site, ensuring safer and more efficient fire fighting activities.

Handling of Narcotics

As one of our ethical drug products, we supply morphine preparations, a narcotic that can help relieve severe pain cancer patients can experience. The handling of this narcotic is managed very strictly with tight control over access, locks, inventory, shipments, disposal, and record keeping.

Handling of Radioactive Substances

Radioactive isotopes are used effectively for the screening, evaluation and pharmacokinetic testing of drug candidate compounds. In accordance with the Laws Concerning the Prevention from Radiation Hazards due to Radioisotopes and Others, the Pharmaceutical Research Laboratories use these substances only in approved facilities, and under strict observance of approved nuclides and quantities. To ensure safety, lab technicians undergo regular training and health exams, and the work environment is tightly controlled.