

# Management of Chemical Substances

At the Nippon Kayaku Group, we deal with many different kinds of chemical products. As such, to ensure a safe and healthy environment, we make sure that these chemical substances are managed properly.

## Accident Prevention and Other Safety Measures in Distribution

### ■ The Yellow Card System

Whenever hazardous chemicals are transported, we require the driver of the vehicle to carry a Yellow Card\*<sup>3</sup> as a precautionary measure for emergency situations.

\*<sup>3</sup> 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 for any accidental spills, we stock emergency chemical-spill supplies at locations around the country and conduct regular drills. Also, we are always looking for ways to reduce risk during transportation including review of transportation routes.

### ■ Being prepared for chemical spills

In order to be prepared for a possible hazardous chemical spill, we have predetermined procedures to deal with such situations, and conduct drills to practice these procedures, including the use of self-contained compressed-air breathing apparatus.



Hazardous chemical spill treatment drill

## Management of Narcotics and Other Hazardous Materials

### ■ Management of hazardous material at our plants

At our plants, receipts and shipments of goods, including raw and intermediate materials, are managed using computers. This system allows us to track hazardous material volume by storage location. In the unlikely event of a fire, this system can provide accurate information on the amount of hazardous material stored in or near the fire location, allowing for effective firefighting activities.

### ■ Control of narcotics

As one of our pharmaceutical products, our firm offers morphine preparation, a narcotic that can help relieve the severe pain that cancer patients can experience. The handling of this narcotic is managed very strictly with tight control over entry, lock, inventory, shipment, disposal, and record keeping.

### ■ Control of biological agents

Nippon Kayaku manufactures and sells cancer treatment drugs that are produced using attenuated tuberculosis bacillus (Bacille Calmette-Guérin, BCG). Information such as address, serial number, and quantity are recorded and stored for 10 years for each wholesaler and medical institution to which these product are sold. This allows the tracking of each sale should there be an infectious outbreak.

### ■ Control 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, the Pharmaceutical Research Laboratories makes use of these substances only in approved facilities, and under strict observance of approved nuclides and quantities. To ensure safe operation, lab technicians undergo regular training and health exams, and the work environment is tightly controlled.

## Collection and Storage of Chemical Substance Data

Since 1990, we have accumulated data on the risks of raw materials, intermediates, and products manufactured and used by our firm to ensure proper and safe handling of these chemical substances. This database currently contains information on approximately 2,900 substances, and can be accessed through our company's internal network.

We have classified and indexed the chemical substances into five categories depending on their risk level. Risk considerations for facility installations, handling procedures, protective equipment, and similar matters are made according to these risk indices.