



## — Initiatives with Our Customers

The Nippon Kayaku Group conducts company-wide quality activities under its quality system in order to supply the best products to customers. We are mindful that product quality improvements, safety and reliability, as well as the provision of technical services and information are paramount to improving customer satisfaction.

### Quality Initiatives

The Nippon Kayaku Group has established a basic policy called [The Declaration on Environment, Health and Safety, and Quality](#) and has built a quality management system to continually deliver the best products that satisfy customers. We deploy various initiatives for quality across the entire company and work on quality assurance and quality improvement activities to increase customer satisfaction.

#### Quality Assurance and Quality Improvement Activities

The Quality Management Division of the Technical Operations Group heads up the Nippon Kayaku Group's quality assurance and quality improvement activities.

Quality assurance activities aim to mitigate quality process failures, cut back on customer complaints, and carry out various training to enhance and reinforce quality control skills in order to stabilize quality.

Quality improvement activities involve quality risk assessments, in addition to various training activities. A collection of best practices on quality improvements is also published in order to promote comprehensive understanding about quality improvement methods. Also, laboratories are working to enhance their design and development capabilities through the introduction of quality engineering and statistical methods.

Below, we will take a closer look at various training activities.

We offer "Field Data Analysis - Learning Through Experience" program geared toward researchers and developers and plant employees for practical training on statistical analysis methods, send employees to take part in outside quality training, and provide outreach teaching at plants as part of internal auditor training.

Here, we will take a look at measures to reduce customer complaints and curb quality process failures.

At each of our plants, we utilize quality control methods such as management diagrams as well as carry out quality patrols and QYT activities (quality hazard detection training), as part of our daily quality control activities. Why-why analysis and change management as well as change point management are used as part of efforts to reinforce preventive measures. Additionally, quality process mishaps are compiled into a company-wide database so that information is shared horizontally across business sites.

To verify that the Nippon Kayaku Group's quality management system is operating effectively, we conduct quality assessments of business sites in Japan and group companies, including those outside Japan.



The "Field Data Analysis - Enjoying Learning Through Experiences" workshop in progress. Participants logically discuss complex cause-and-effect relationships at their desk and then carry out experiments to test out their theories.

#### Quality Assurance and Quality Improvement Activities at each business site

Each business site of the Nippon Kayaku Group deploys various types of quality assurance activities.

Also, we are building a database of quality process mishaps so that it can be shared horizontally at other business sites as well.

### Quality assurance activities

- Quality patrols
- Trend management (visualization)
- Activities to prevent reoccurrences of quality troubles (why-why analysis, etc.)
- Reinforcement of quality management technologies

### Quality improvement activities

- Quality risk assessments
- Improvement of design and development capabilities
- Statistical analysis method ("Field Data Analysis - Learning Through Experience")
- Activities to prevent reoccurrences of quality troubles (why-why analysis, etc.)

## Quality Risk Assessments

Whenever changes are made to production process, such as the installation of a new machine that will take the place of a new worker, for example, (whenever so-called 4M changes are made), we conduct a quality risk assessment to prevent quality troubles before they occur. The term "4M changes" refers to changes related to man, machine, material and/or method.

## Why-why Analysis Initiatives

For customer complaints and quality process failures we encourage the use of why-why analysis by the workplace using Nippon Kayaku's why-why analysis manual in order to reinforce preventive measures. Furthermore, we use a version of this manual translated into the Chinese language to conduct training on why-why analysis at our group companies in China.

## Creation of Our Own "Why-Why Analysis" Manual

There are many past examples of incidents involving non-compliance at Nippon Kayaku and similar events, and analysis indicated that insufficient efforts were being made to find the fundamental cause of these incidents. Therefore, we decided to implement why-why analysis in an effort to correctly identify relationships between cause and outcome, determine the fundamental cause, and prevent similar events from happening again. Each plant selects members to promote these efforts and we have also compiled our own "Why-Why Analysis" Manual (made available in both Japanese and Chinese language versions). This manual is used by every workplace for why-why analysis.



## Quality Improvement Promotion Activities

Nippon Kayaku's initiatives for improving quality began with the voluntary introduction of statistical approaches to QC\* activities by plant engineers in 1948.

After receiving the Deming Prize in 1963, Nippon Kayaku organized its very first In-house QC Circle Conference in 1966 as a venue to present the results of its QC activities. Since then, we have expanded the scope of these activities into "Small Group Activity Meetings" open for all employees, with this name later changed to the "Meeting of the Movement for Tomorrow." The scope of these activities has expanded from quality improvement to operational reform, cost reductions, 5S activities, next-generation development, energy conservation, health and safety improvement, and environmental conservation.

Starting in 2014, these small group activities were revamped exclusively for Nippon Kayaku with a focus not only on improvement, but also on human resources development and SCR activities.

## Briefings on the Safe Use of Agrochemicals

The Agrochemicals Business handles preparations such as Kayaku Chloropicrin, Dojo Picrin, and Chloplic Flow, or others that use chloropicrin as an active ingredient .

These products are agrochemicals essential for crop cultivation as soil fumigants for eliminating pathogens and pests in the soil. They are widely used by farmers because they have a highly stable efficacy and they do not remain on the crops.

Although highly effective, chloropicrin is designated as a hazardous substance that requires careful attention during use. Chloropicrin easily vaporizes, causing pain in the eyes and throat. In a worst case scenario, a person may die from chloropicrin exposure. Therefore, this agrochemical must be handled with the utmost care.

For this reason, the Agrochemicals Business holds briefings and instruction sessions prior to use regularly as needed to ensure that customers use these products not only effectively, but safely as well.



A green pepper farm located in the major producing area of Notsu-machi, Usuki City, Oita Prefecture. Approximately 100 farmers in the area cultivate green peppers.

## Medical Information Service Center and Securing Customer Trust

The Medical Information Service Center receives toll free calls from patients and medical professionals with various questions relating to our pharmaceuticals and medical devices, such as anti-cancer drugs, treatments for

autoimmune diseases and intravascular embolic materials. Staff at the Medical Information Service Center carefully and accurately respond to each inquiry to ensure that all of the products supplied by Nippon Kayaku are of the highest possible quality. We also conduct surveys to check whether our response meets the expectations of the customer as part of our continual improvement initiatives. Additionally, staff work with medical representatives (MRs) that visit medical facilities to ensure they can provide information that is beneficial to patients, while customer requests and opinions are proposed and reported to each relevant department in charge within the company. The Medical Information Service Center is committed to improving medical care under the slogan "provide proper usage information and improve customer satisfaction in all situations."



Medical Information Service Center