



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.

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.

The educational activities for the quality assurance and the quality improvement

As the educational activities for the quality assurance, 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.

The activities to prevent recurrence of the quality process abnormality

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.

Global Quality Control and Human Resources Development within the Safety Systems Group

The safety systems group supplies automotive safety components to customers around the world. This requires that it provide and guarantee the same standard of quality. The group has production facilities worldwide and so the Himeji mother plant has implemented a robust design*1 resilient in the face of numerous variations given the requirements of differing production sites in terms of culture, language and technologies. This approach has enabled it to provide the same level of quality worldwide.

At its global production sites, locally hired managers and line workers are selected to take part in extended trainings at the mother plant to obtain essential knowledge and skills. After completing their training, they return to their workplaces and serve as instructors to pass on their knowledge and skills to others.



Technical interns from Malaysia and members of the Himeji Plant's Quality Assurance Department

*1 Robust design: A design in which product performance and quality does not vary and is not affected by interference or measurement errors.

Briefings on the Safe Use of Agrochemicals

The Agrochemicals Group supplies insecticide Fumon[®], which is possible to simultaneously exterminating aphids, mites and whiteflies on vegetables.

It is made from polyglyceryl fatty acid ester which is used as food additive and block pest spiracles. It is very useful for improving the ability to control. It can be applied unlimited number of times and even up to a day before crop harvest. Sometimes pesticides cause phytotoxicity, Fumon[®] is expected to reduce the risk of phytotoxicity because it can be used diluted down to 1:1000.

Agrochemicals business will continue offering and marketing of Fumon for produce crops safely with high quality.



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

Aiming to Create Products that Satisfy Customers

The Nippon Kayaku Group is undertaking various research and development for new products and services in order to supply products that support the enriched and healthy lifestyle of its customers.

Head-up display related products for automobiles (under development)

Nippon Kayaku is developing products that can contribute to the safe driving support systems. Head-up displays, which display information on the windshield or clear screen of cars, allow the driver to access information without averting their line of sight. These displays are anticipated to become more popular going forward in place of conventional car navigation systems.

However, as windshields are made up of two plates of glass, there is the issue with head-up displays showing double images if simply projecting an image onto the glasses, while the display is difficult to see when wearing polarized sunglasses.

To address this issue, we developed a new product called Freelux[®] HUF*2 using our proprietary optical design expertise.

Freelux[®] HUF is a breakthrough film that eliminates double image of a projected image as well as allows images to show up vividly to the eyes even when wearing polarizing sunglasses by inserting this film between the two plates of glass of a windshield. This was exhibited as a conceptual sample at the 2017 Highly-functional FILM EXPO, which attracted many visitors who were able to experience its effects. Currently, we are working on development aimed at commercialization.

Together with our group companies, we will continue to propose new products with features that will contribute to the "Environment, Energy Conservation, and Safety."

*2 [Freelux[®] HUF] Light control film for head-up displays.



HUD using Freelux[®] HUF