Quality

# **Water Resource Conservation**

## Initiatives for Using Water Resources in Water-stressed Areas

Nihon Kohden has identified water-stressed areas in each region in which the Company operates and evaluated risks accordingly. We utilized the Aqueduct Water Risk Atlas published by the World Resources Institute (WRI) and have confirmed that total 13 sites are in relatively water-stressed areas compared to other regions. Although no water-related issues have occurred in water-stressed areas at this time, we will continue to appropriately comply with local regulations and work on proper and efficient use and safe supply of water.

We are currently collecting data at some overseas non-production sales subsidiaries where we have not been able to obtain actual values.

Americas	U.S., Mexico (4 sites)
Europe	Spain (1 site)
Asia and others	India, U.A.E. China, Kenya (8 sites)

## Water Management Plan

Nihon Kohden's mother factory, Nihon Kohden Tomioka, which produces reagents for hematology analyzers, accounts for 38% of the Company's total water intake. Nihon Kohden Tomioka strives to make effective use of water resources by setting annual environmental targets based on projected water consumption for the entire Tomioka Site, as well as monitoring water intake and water discharge and properly managing them.

## Initiatives of the Water Resources Protection Activity Team

Nihon Kohden has set "Promote circular economy" as one of its material issues for sustainability and is strengthening its efforts by setting the amount of water consumption and use of the water cycle as one of its KPIs.

Nihon Kohden Tomioka has implemented water resource measures at its domestic and international reagent manufacturing plants and Tomioka Production Center.

# Measures at Domestic and International Reagent Plants

In addition to Tomioka, Nihon Kohden manufactures reagents in Shanghai (China), Florence (Italy), Surat (India), and Dubai (U.A.E.). Maintaining the quality level of reagents requires a large amount of water during the purified water production stage and the reagent washing stage of the pipeline. Water usage and wastewater volumes vary depending on the specifications and scale of each plant's equipment. Therefore, we investigated the water usage at each stage, from water intake to purification, RO concentration\*, shipment, in-plant line cleaning, and wastewater, as well as the ratio of reagent shipment volume and wastewater volume to water intake volume for each plant.

Next, we clarified the cleaning procedures at each plant to identify the appropriate amount of purified water used for cleaning. By comparing and verifying usage and cleaning procedures, we consider reducing each plant's target values (KPIs).

\*RO (Reverse Osmosis) Concentration: Removing impurities from water using an RO membrane to increase the concentration of residual substances.

Quality

**Environment** 

## Water Resource Conservation

#### ■ RO Membrane\* Replacement at the Dubai Reagent Plant

Through multiple discussions between production personnel in Dubai and Tomioka, we found that the ratio of tap water usage to purified water had been over target by 20% at the Dubai reagent plant, leading to the replacement of the RO membrane. Continued investigation of usage allowed us to set appropriate replacement times for the RO membrane.

#### ■ Review of Cleaning Procedures at the India Reagent Plant

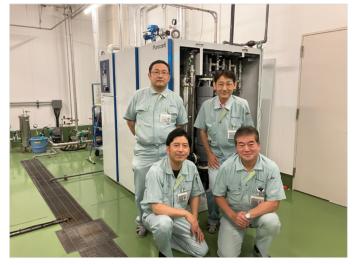
With the increase in production volume at the India reagent plant, production and development employees at India and Tomioka collaborated to review the cleaning procedures. This review contributed to the effective use of water resources by reducing water usage and lowering the wastewater ratio to intake water by 4.6%, while maintaining the quality level of the reagents. This initiative marked an essential step towards achieving production efficiency with maintained quality and environmental protection.

## ■ Collaboration with Partner Companies

At the Tomioka reagent plant, we have advanced the visualization of water intake and wastewater volumes as well as promoted water resource measures in collaboration with partner companies. By working together to produce RO water efficiently, we reduced water usage for purified water production by approximately 10%.

Although reagent manufacturing facilities differ in each country, we will continue to consider expanding the successful cases of water usage reduction from the Tomioka reagent plant to other overseas reagent plants.

\* RO (Reverse Osmosis) Membrane: It is an ultra-fine filter with pores measuring 0.001 to 0.002 microns. Water treated with an RO membrane is referred to as RO water



Members working on water resource measures at the Tomioka reagent plant

Quality

Environment

## Water Resource Conservation

#### Measures at the Tomioka Production Center

The team to reduce water usage and discharge has continued efforts throughout the Tomioka Production Center.

They continuously investigated water intake and discharge volumes, replaced aging water supply pipes, and implemented leak prevention measures.

Additionally, in the Tomioka Production Center, which has many employees, the team has been considering using rainwater for toilet flushing since FY2022. They measured the amount of potable water used in toilets and calculated the cost of installing a new rainwater tank. Although the cost of installing a new rainwater tank and water supply pipes, in addition to existing facilities, and the annual maintenance costs exceeded the budget plan. Therefore, we decided not to proceed with this investment in a rainwater tank. However, these considerations provided an excellent opportunity to share information within the company and think about what can be done to reduce water usage. The new Tsurugashima plant, which started construction in July 2024, includes the use of rainwater for toilets in its design plan. Furthermore, to reduce water usage, the team compared and verified nine types of toilet paper over two months to identify water-saving toilet paper. As a result, they switched to toilet paper that does not cause pipe blockages and achieves water-saving effects, realizing a water-saving impact of approximately 30 m<sup>3</sup>/month.

The team will continue to promote efforts to solve environmental issues through our business activities.



Members working on water resource measures at the Tomioka Production Center