

December 23, 2021
Sysmex Corporation
Yamato Transport Co., Ltd.

Systemex and Yamato Transport Commence Dry Ice-Free Transportation of Reagents for Gene Testing in Consolidated Cargo at the Ultralow Temperature Range of Minus 70 Degrees Celsius

- Realizing an Eco-Friendly, Low-Cost, and Sustainable Pharmaceutical Product Cold Chain -

Systemex Corporation (HQ: Kobe, Japan; Chairman and CEO: Hisashi Ietsugu) and Yamato Transport Co., Ltd. (HQ: Chuo-ku, Tokyo, Japan; President: Yutaka Nagao) announced today the commencement of dry ice-free¹ transportation of reagents for gene testing in consolidated cargo at the ultralow temperature range of minus 70 degrees Celsius. This marks the first time this has been accomplished in the Japanese *in vitro* diagnostic products industry, with transportation commencing from Systemex's office in Kobe to a testing organization in Kawasaki in December 2021.

This model is revolutionary because it is both eco-friendly and cost effective for long-distance transportation of pharmaceutical and other products at the ultralow temperature range of minus 70 degrees Celsius, which requires the most strict quality and temperature control, without using any dry ice. Previously, the use of dry ice was considered essential.

Going forward, the two companies will expand the list of products for transportation and the delivery service area to realize a sustainable cold chain for pharmaceutical products, thus providing quality and stable product supply to medical professionals.

Systemex uses dedicated trucks and charter services to transport reagents for gene testing, which demands a high level of quality and temperature control, making it necessary to address transportation cost, flexibility in logistics, and efficiency. Furthermore, this mode of transport requires dry ice from CO₂, which is a byproduct of other industrial processes such as oil refining, for cold storage throughout the transportation process. To reduce the environmental burden, stabilize procurement, and mitigate the risk of rising procurement costs, Systemex has been seeking ways to improve.

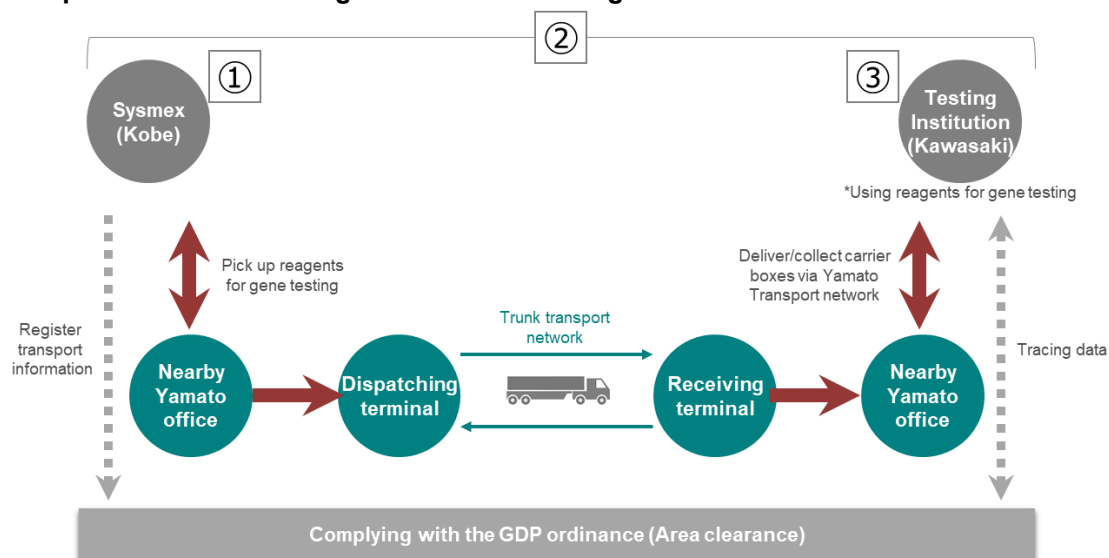
To offer solutions to these challenges and achieve a stable supply of reagents for gene testing to medical professionals, in February 2021, Systemex and Yamato Transport commenced GDP-compliant² transportation of such reagents in consolidated cargo in an ultralow temperature range, while reducing the amount of dry ice used by around 50%.

In an effort to further reduce the environmental burden, Systemex and Yamato Transport have conducted transportation trials in which refrigerants frozen in an ultralow-temperature freezer are used to substitute dry ice during transportation, to confirm cooling performance higher than when using dry ice. Following the trials' results, in December 2021, the two companies commenced dry ice-free transportation of reagents for gene testing in consolidated cargo at the ultralow temperature range of minus 70 degrees Celsius for the first time in the Japanese *in vitro* diagnostic products

industry between Sysmex's office in Kobe and a testing institution in Kawasaki.

Going forward, the two companies will expand the list of products for transportation and the delivery service area in Japan by utilizing this model, which makes long-haul transportation of pharmaceutical and other products possible without dry ice. The two companies will also apply this model to international transportation services in an attempt to advance the cold chain by achieving quality and stable product supply.

Transportation Flow of Reagents for Gene Testing



- ① No need to use gas-barrier bags and vacuum packaging at the time of shipment to prevent products from acidifying
 - ✓ Reduced environmental burden and workload and stabilized quality
- ② Temperature during transportation is stabilized over a long time (Trials' results: minus 65 degrees Celsius or below, for about 48 hours)
 - ✓ Stabilized quality
- ③ No need to worry about dry ice adhering to products and unpacking staff becoming hypoxic at the time of delivery
 - ✓ Reduced workload

Terminology

- 1 Using no dry ice
- 2 Good Distribution Practices: A basic scheme for assuring the quality of pharmaceuticals in the distributive process, from shipment from a manufacturing plant to delivery to medical institutions.

Reference

February 1, 2021 press release entitled "Sysmex and Yamato Logistics to Commence GDP-Compliant Transport of Reagents for Gene Testing at the Ultralow Temperature Range of Minus 70 Degrees Celsius or Below - Also Commencing Experiments for Ultralow Temperature Transport Without Using Dry Ice -"

<https://www.sysmex.co.jp/en/news/2021/pdf/210201.pdf>

Sysmex's Materiality

Sysmex has identified "Environmental consideration" as one of the issues it prioritizes (materiality), promoting environmental consideration through product lifecycles. We will remain committed to realizing a sustainable society by forging ahead with our initiatives for climate change. At present, we use dry ice (approximately 90 tons per year for all reagent products) and plastic gas-barrier bags to transport reagent products. By expanding the scope of products for dry-ice-free transportation, we will work to reduce the amount of dry ice and plastics used.



The information contained in this press release is current as of the date of the announcement but may be subject to change without prior notice.