



Takeda's Position on the Responsible Use of Plastics

Summary

Plastic pollution impacts people and the environment in many ways. Guided by our corporate philosophy centered around patients, people and the planet, we:

- Acknowledge that plastics are currently necessary materials that are critical for manufacturing, packaging, distribution, and application of Takeda's products
- Recognize that irresponsible development, use, and disposal of plastics can have negative impacts on our planet and human health; and
- Strive to carefully assess and minimize the life cycle environmental impacts of plastics used in our facilities, products, processes, and throughout our value chain, while protecting product quality

Although the use of plastic is necessary for our products and operations, we believe that meaningful actions can be taken to both reduce and mitigate the negative impact of plastics on the environment.

Background

Plastics have many useful properties that are beneficial to the pharmaceutical industry and critical to Takeda's operations. Because plastics are chemically stable, airtight, and can be sterilized, they are used throughout our operations to ensure product quality, patient safety and access to our medicines. These properties also prolong product shelf life, preventing unnecessary waste. Plastics can be strong yet lightweight, providing product protection while decreasing fuel used during transit. Additionally, plastics

can have a lower environmental footprint than competing materials and are typically less energy intensive to manufacture than glass, metal, and other alternatives.

However, plastics also have substantial negative impacts on our environment. Currently, most plastics are derived from non-renewable fossil fuels which exhibit adverse environmental impacts including air pollution¹ and water pollution² during raw materials extraction and processing, and through the irresponsible management of the waste generated when these materials are not recycled. While some recycling of plastics occurs, the majority of plastic waste is sent to landfills, incinerated or disposed of directly into the environment, especially in regions with poorly regulated waste handling practices. The United Nations Environment Programme (UNEP) reports that, “between 1950 and 2017, approximately 7 of the estimated 9.2 billion tons of plastic produced became plastic waste, three-quarters of which was either discarded and placed in landfills, became part of uncontrolled and mismanaged waste streams, or was dumped or abandoned in the environment, including at sea.”³ Additionally, the emerging issue of microplastics in the environment raises questions and concerns regarding the long term effects on human health and the environment.⁴

Takeda’s Perspective

The following principles guide Takeda’s strategic approach towards managing plastics:

- We recognize the need for more alternative sources of plastics that are not fossil fuel derived, are renewable, and do not contribute to climate change. We take a science-based approach and participate in industry collaborations that seek alternatives for plastics, and materials that can be recycled for packaging and medical devices.
- We seek to minimize life cycle environmental footprint by optimizing design, evaluating alternative materials, and evaluating recyclability for all plastics that are used in our facilities, products, processes, and throughout our value chain. Takeda has made strides in the use of biopolymers for the packaging of solid-dose pharmaceutical products, specifically for product bottles in Japan.
- We have implemented a preferred waste management hierarchy to drive waste minimization and mandate responsible waste management. We also evaluate our plastic waste streams and prioritize volume reductions or improvement efforts based on significance of impact.

¹ <https://www.ciel.org/project-update/plastic-climate-the-hidden-costs-of-a-plastic-planet/>

² <https://www.iucn.org/resources/issues-brief/marine-plastic-pollution>

³ <https://www.unep.org/interactives/beat-plastic-pollution/>

⁴ <https://www.who.int/know-your-ocean/ocean-topics/ocean-human-lives/pollution/marine-microplastics/>

Conclusion

Currently plastics are necessary to protect product quality and patient safety, which cannot be compromised. At the same time, Takeda recognizes the critical need for responsible plastic usage, handling, and disposal. We are committed to minimizing the environmental impacts from our use of plastics while fulfilling our mission to deliver safe and high-quality products that provide better health for people and a brighter future for the world.

About Takeda

Takeda is a global, values-based, R&D-driven biopharmaceutical leader headquartered in Japan, committed to discover and deliver life-transforming treatments, guided by our commitment to patients, our people, and the planet. Takeda focuses its R&D efforts on four therapeutic areas: Oncology, Rare Genetics and Hematology, Neuroscience, and Gastroenterology (GI), with expertise in immune and inflammatory diseases. We also make targeted R&D investments in Plasma-Derived Therapies and Vaccines.

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