

FOR IMMEDIATE RELEASE

May 16, 2023

## Kao and Lion Partner in Film-to-Film Recycling of Used Refill Packs First Product Making Partial Use of Recycled Materials Reaches the Market

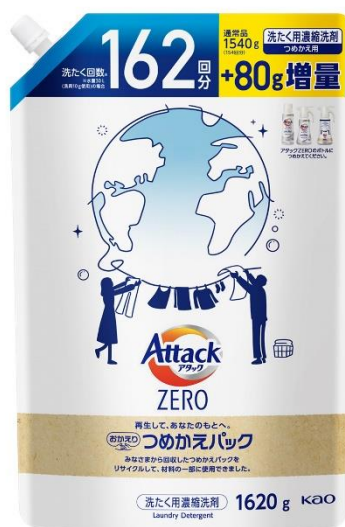
Kao Corporation and Lion Corporation have succeeded in creating the first product making partial use of recycled materials to produce the same type of packaging through recycling of used refill packs. In September 2020, the two companies announced that they would partner to work toward social implementation of film packaging recycling to create a circular economy for plastic packaging and have been spearheading recycling of film packaging used in refill packs. Refill packs (1,620g) of Kao's *Attack ZERO*, a concentrated liquid clothing detergent, and Lion's highly concentrated laundry detergent *Top Super Nanox for Odors XXL* refill pack using the newly-developed recycled material will go on sale in limited quantities at selected stores\*<sup>1</sup>, with gradual introduction starting on May 29, 2023.

\*1 Some Ito-Yokado and Welcia Pharmacy stores will carry both products. Some Aeon stores will carry the Kao product only.

### News Releases from September 2020

Kao: [Working Toward Resource Circulation for Plastic Packaging Kao and Lion Begin Collaboration on RecyCreation Activities](#)

Lion: [Working Toward Resource Circulation for Plastic Packaging Kao and Lion Begin Collaboration on RecyCreation Activities](#)



## Recycled Refill Packs

Film packaging for refill packs, which consists of several thin layers of different materials, is designed to protect detergent, shampoo and other products from temperature, humidity and UV rays. Recycling these different materials has been problematic so far, however, as the recycled film is of uneven quality and holes or other imperfections can appear during the manufacturing process. In June 2021, Kao set up a pilot plant at its Wakayama Research Laboratories to work on developing and testing recycling of its film packaging. Having developed recycling technology for refill packs, the company succeeded in commercializing refill packaging using recycled material. The recycled material forms one of the middle layers of the packaging.

The new packaging contains 10% recycled material, some of which came from refill packs collected by Kao through municipalities and also through field testing collaboration with Lion, where refill packs were collected from the general merchandise supermarket Ito-Yokado's Hikifune store and Welcia Pharmacy stores. The used refill packs collected accounted for around 1% of the total material used, while the remaining 9% came from refill packs manufactured but ultimately unused.



Steps to manufacturing recycled refill packs (left) and recycled pack structure (visualization, right)

## News Release from May 2022

[Kao Develops Practicable Technology for Film-to-Film Recycling of Used Refill Packs](#)

## News Releases from November 2020

Kao: [Kao and Lion Begin Collaboration on Recycling Field Testing](#)

Lion: [Kao and Lion Begin Collaboration on Recycling Field Testing](#)

## News Releases from November 2021

Kao: [Kao and Lion, with Welcia Yakkyoku and Hamakyorex, Begin Field Testing for Recycling of Used Refill Film Packaging](#)

Lion: [Kao and Lion, with Welcia Yakkyoku and Hamakyorex, Begin Field Testing for Recycling of Used Refill Film Packaging](#)

## **Details of Collaboration**

### **Plastic containers in the consumer products market**

In the Japanese consumer products market, Kao, Lion and other manufacturers have been reducing the amount of plastic used for packaging since the 1990s. Major reductions in plastic use have been achieved by making products more highly concentrated to reduce package size, and by developing and promoting the use of refill and replacement products. In 2021, refill and replacement products accounted for around 80% of total product shipment volumes\*<sup>2</sup>. Recycling of refill packaging, however, had been difficult until now because the film materials used in the packaging are mainly made of composite materials incorporating many different ingredients, which when recycled produced film of uneven quality due to the wide variety of different components. In addition, there was no established sorting and collection system for plastics used for personal and home care products, and consumers were not sufficiently informed of the need to recycle plastics.

\*<sup>2</sup> [Change in Plastic Use in Packaging in the Soap and Detergent Industry \(by weight\), Japan Soap and Detergent Association \(Japanese\)](#)

### **Kao and Lion collaboration**

Against this background, the two companies announced in September 2020 that they would collaborate toward introducing a circular economy for plastic packaging by recycling film packaging used for refill packs for detergent, shampoo and other products. As part of RecyCreation\*<sup>3</sup>, the companies have been studying film-to-film recycling to enable future social implementation of film packaging recycling and conducting the following four activities.

\*<sup>3</sup> RecyCreation is a term coined by Kao to denote upcycling through which more enjoyable and improved products are developed and resulting in new value creation, rather than recycling materials for the purpose of reproducing the same types of materials. The concept of this initiative is “Throwing it away after use. We want to change this common practice.”

- Studying ways to sort and collect film packaging in cooperation with consumers, government agencies and retailers.
- Creating recycled materials and packaging quality design with consideration for use in wide-ranging products and ease of sorting and collection by consumers, and that can be used in common across companies or industries.
- Studying ways to jointly use recycled materials that are collected and recycled.
- Promoting and educating about recycling to deepen consumers’ understanding and encourage cooperation.

### **Future Activities**

#### **● Improving the film packaging sorting and collection system**

Collection of refill packs will continue at Ito-Yokado’s Hikifune store and Welcia Pharmacy stores, along with recycling education activities to deepen consumers’ understanding and encourage cooperation. Studies will also be conducted into creating a sorting and collection process that

consumers will find easy to use, and devising more efficient collection methods in cooperation with government agencies and retailers.

- **Improving and establishing recycling technologies**

Kao will work on improving its recycling technology for refill packs and Lion will develop technology to create more easily recycled film packaging.

- **Drawing up guidelines for packaging design**

Kao and Lion will draw up guidelines for packaging design that can be used in common across companies or industries to facilitate recycling.

## **Related Information**

### **Kao Corporation**

- [Kao launches new ESG Strategy “Kirei Lifestyle Plan” to support consumer lifestyle changes](#)
- [Kao’s New Challenges for the Future: Accelerating Purposeful Business Commitment with ESG](#)
- [Kao sustainability website](#)

### **Lion Corporation**

- [Sustainability Material Issues and Objectives for 2030](#)
- [Lion’s SDG-Related Initiatives](#)
- [Lion’s Sustainability](#)

## **Company Profile**

### **Kao Corporation**

Kao creates high-value-added products and services that provide care and enrichment for the life of all people and the planet. Through its portfolio of over 20 leading brands such as *Attack*, *Bioré*, *Goldwell*, *Jergens*, *John Frieda*, *Kanebo*, *Laurier*, *Merries*, and *Molton Brown*, Kao is part of the everyday lives of people in Asia, Oceania, North America, and Europe. Combined with its chemical business, which contributes to a wide range of industries, Kao generates about 1,550 billion yen in annual sales. Kao employs about 35,400 people worldwide and has 136 years of history in innovation. Please visit [the Kao Group website](#) for updated information.

### **Lion Corporation**

Representative	Masayuki Takemori, Representative Director, President and Executive Officer
Address	1-3-28 Kuramae, Taito-ku, Tokyo 111-8644, Japan
Established	September 1918 (founded October 30, 1891)
Net Sales (consolidated)	389.8 billion yen (term ended December 2022)

No. of employees (consolidated)	7,587 (as of December 31, 2022)
Business description	The manufacture and sale of toothpastes, toothbrushes, soaps, detergents, hair- and skin-care products, cooking-related products and pharmaceuticals. Exports to overseas affiliates.

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