FPCO Method Recycling

FP CORPORATION

2025 Edition

What's FPCO ?

Let me introduce FPCO to you !

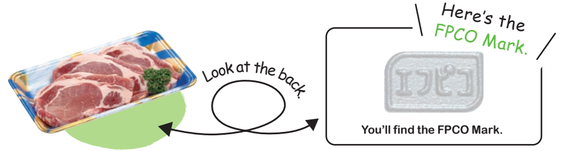
Bio

Estimated age : 100 million and 5 years old
Attributes : Goofy
Likes : Clean containers
Frequent haunts : Shops where containers are collected

Pico-saurus

1 We make food containers.

We are a leading manufacturer of widely recognized food containers. These containers play a crucial role in transporting various types of food and are commonly used for many containers sold in supermarkets and convenience stores today.



2 Corporate profile.

Established 1962

Employees 988 (5,250 in the entire group) *As of March, 2025

Fukuyama Headquarters
Fukuyama-shi, Hiroshima

Comprehensive Research Institute
Fukuyama-shi, Hiroshima

Tokyo Headquarters
Shinjuku-ku, Tokyo

3 Our history behind food

Championing new developments in response to changes in food culture and eating habits !

Japan's first! Developed colored and patterned containers!

Industry's first! Released the Eco Tray with an Eco Mark certification in 1992.

Wide variety! We produce a wide variety of containers in different colors, patterns, and shapes. These containers enhance the presentation of food, creating an enjoyable dining experience!

4 FPCO's initiatives

FPCO engages in various environmental actions in partnership with the national government and local authorities.

Certified by the Eco-First Program

Under the Eco-First Program, environmentally conscious businesses pledge their efforts towards environmental preservation to the Minister of the Environment.
FPCO achieved the Eco-First Business certification in 2011.

FPCO is a full member (secretary) of the Clean Ocean Material Alliance

The Alliance was established in January 2019 to promote innovation in addressing marine plastic waste issues. FPCO is a founding member.

Japan Partnership for Circular Economy (Abbreviation J4CE *J Force)

J4CE was established in March 2021 by the Ministry of the Environment, the Ministry of Economy, Trade and Industry, and the Japan Business Federation.
FPCO's initiatives are listed in its case studies.

DECOKATSU

In October 2022, the Ministry of the Environment established DECOKATSU with the aim of inspiring significant public and consumer behavioral and lifestyle changes to achieve the 2030 reduction targets and 2050 carbon neutrality. FPCO has joined the program since its inception, and FPCO's DECOKATSU Declaration is posted on the website.

Participation in the 30by30 Alliance

30by30 is an initiative that aims to conserve at least 30% of land and marine areas as natural environments to preserve healthy ecosystems by 2030. FP Corporation joined the alliance in January 2025, based on recognition of its efforts through the FP Corp. Environment Fund.

Past awards

ECO MARK AWARD 2010・2024

The FPCO method "Tray to Tray™" recycling received the Gold Prize at the inaugural Eco Mark Award in 2010. In 2024, FP Corporation was honored with the Excellence Prize in recognition of its continued expansion and enhancement of this initiative.

2015 Minister of the Environment Award for Climate Action

FPCO received an award for its efforts in reducing CO_2 emissions using its unique recycling method.

Evaluation of employees' working practices

2023 Eruboshi certification

Based on the Act on the Promotion of Women's Active Engagement in Professional Life, FPCO received an Eruboshi certification (level 2) for implementing initiatives promoting women's active engagement.

2025 Excellent Corporations for Health Management

FPCO has been recognized as a company that strategically implements initiatives to manage its employees' health from a management perspective.

Features of a Container

Useful and eco-friendly plastic products!

Useful

Playing an important part in everyone's food life.

Most foods in stores, such as fish, meat, and prepared food, are sold in containers.
Containers serve multiple purposes, such as enabling you to purchase the desired quantity, facilitating easy transportation, preserving food, and preventing liquids and odors from leaking.




Eco-friendly

Foamed PS containers are eco-friendly too!

1 Only a small amount of crude oil is used as a raw material.

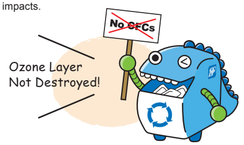
About 95% of the container is filled with air. Polystyrene resin is derived from crude oil, meaning only a small amount of crude oil is effectively used to make the trays.

2 The waste is extremely lightweight!

Foamed PS containers weigh one-third to one-fourth of paper trays and contribute to just 0.2% of household waste. This ratio will decrease further with more recycling.

3 Made without CFCs!

The trays are manufactured without the use of CFCs, so they do not contribute to ozone layer depletion, which has a range of environmental impacts.



4 Recycled with minimal energy use!

They can be sorted more easily than other plastic items, and their recycling requires less energy and produces no hazardous compounds, which benefit the environment.

Properties

Foamed PS containers are light, robust, and safe!

\ Hygienic /

Protect the food from germs and dust and help prevent food poisoning.

\ Light /

Very lightweight and easy to handle and transport.

\ Keeps food fresh /

Preserve raw foods and help maintain their freshness effectively.

\ Water-resistant /

Will not leak or deform, even when holding food with high water content.

\ Heat-resistant /

The air bubbles contained within the material prevent heat transfer, helping to maintain the temperature of the food.

\ Robust /

Foam adds thickness and makes the trays more robust, because they are mostly composed of air.

\ Excellent cushioning /

The air bubbles lessen the impact and gently guard the food.

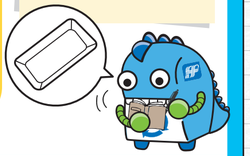
\ Recyclable /

Recyclable multiple times with minimal energy.

What are foamed PS containers?

The trays are made from expanded polystyrene resin, which is a type of plastic. It's also known as PSP trays.

PSP: Polystyrene Paper

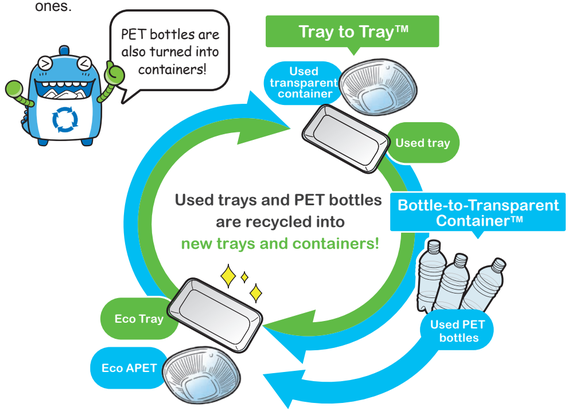


What is the FPCO method of recycling?

Containers are recycled over and over again without ever being discarded!

1 The world's first circular recycling

We collect used containers and PET bottles, which are then processed into raw materials at our recycling facility and turned back into containers. We call the process of turning trays into trays "Tray to Tray™" and the recycling of PET bottles into trays "Bottle-to-Transparent Container™." FPCO is the first in the world to initiate circular recycling by reusing used containers to create new ones.



2 Recycling starts and finishes in stores "Store-to-Store"

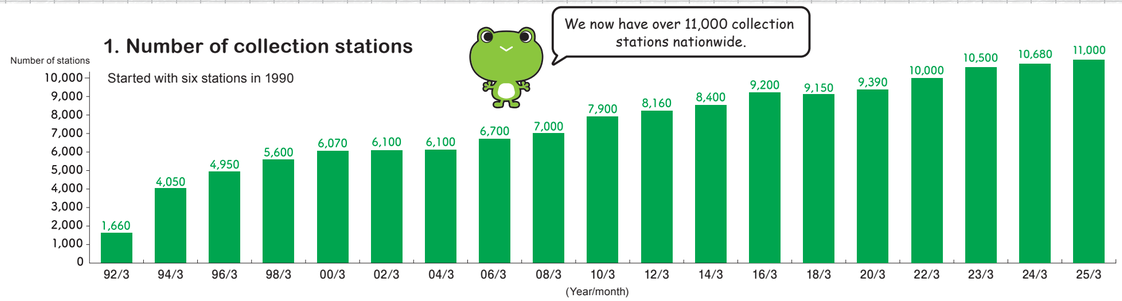
The store collects used containers and PET bottles as resources, which are then recycled into new trays and containers and reused in those stores.
"Store-to-Store" recycling can be done at the stores you visit for your daily shopping.

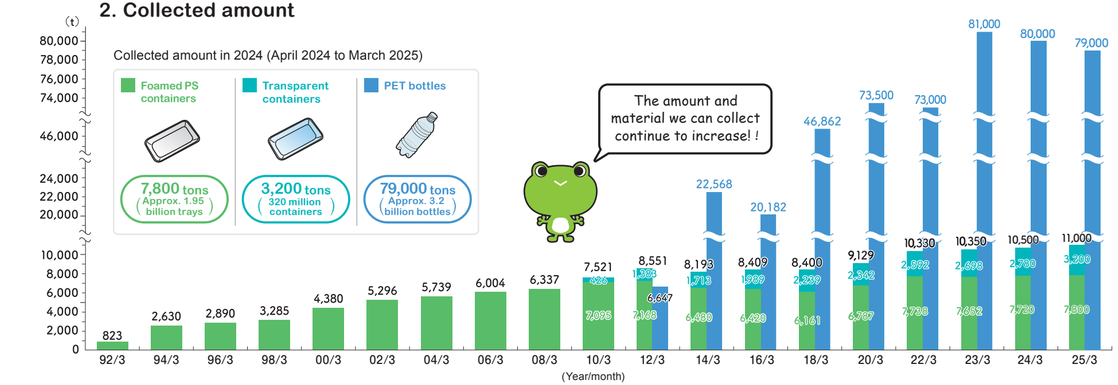
3 Consumers, retailers transporters, and manufacturers work together to recycle.

Many used trays and PET bottles can be recycled by those who use them.
Involving everyone makes recycling more efficient and economical!

This recycling method is only feasible if trays are collected. That's why we rely on every consumer's help!

FPCO method of recycling is spreading rapidly.





I' ll take it from here!

Bio

Abode : Lush, symbiotic forest
Personality : Cheerful and energetic
Hobbies : Loves recycling
Favorite phrases : 'Recycle into trays!' 'Leap into resources!'

PICO-chan

The accomplishments through the FPCO method of recycling

Here is the achievement of FPCO's recycling from 1990 to March 2025, showing the significant impact of everyone's cooperation.

Part 1 When the amount recycled is calculated by cubic capacity

Tokyo Dome

Equivalent to filling the dome **151 times!**

In details

Foamed PS containers and transparent containers: Approx. 50.8 billion
PET bottles: Approx. 27.3 billion

The total weight of the foamed PS containers, transparent containers, and PET bottles is around 920,000 tons.

*The cubic capacity of the Tokyo Dome is 1.24 million cubic meters.
*The calculation is based on the following weights: 4 g per foamed PS container, 10 g per transparent container, and 25 g per PET bottle.
*The cubic capacity of one collection truck is 55 cubic meters.

Part 2 The crude oil saved from recycling is...

A 200-L drum

Approx. **802 million drums!**

In weight

Containers are made of crude oil.

1,900L crude oil ▶ 1,000 kg polystyrene
1,630L crude oil ▶ 1,000 kg polyethylene terephthalate

Recycling recovered foamed PS containers, transparent containers, and PET bottles into containers saves approximately 1.6 billion liters of crude oil.

Part 3 The cost saved from waste treatment is

Approx. **997 billion yen!**

When counted in terms of the number of collection trucks

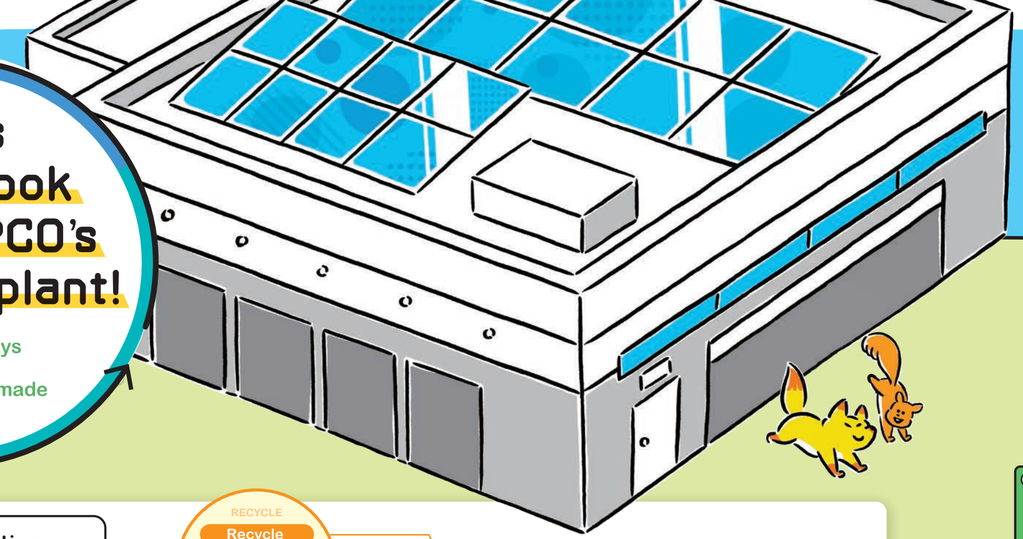
Approx. **399 million trucks**

If all collected foamed PS containers, clear containers, and PET bottles were to be disposed of as waste, approximately 3.78 million 2-ton class collection vehicles would be required.

*The standard waste collection truck (2-ton class) has a capacity of about 4.6 cubic meters.
Each truck can hold around 14,000 containers or 76,800 PET bottles.

Let's take a look inside FPCO's recycling plant!

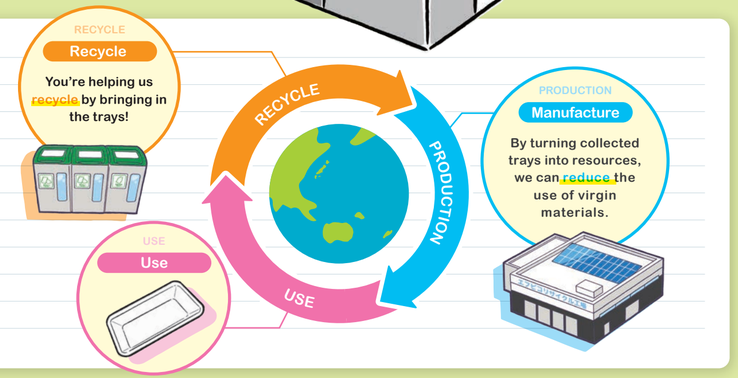
How Eco Trays
&
Eco APET are made



We are contributing to the 3Rs by recycling.

The foamed PS containers, transparent containers, and PET bottles that everyone collected are brought to our recycling plant. There, they are broken down into raw materials and recycled into new containers for use in stores and homes.

3Rs to reduce waste
・Reduce ・Reuse ・Recycle



They are recycled and transformed into new containers at the plant

Course 01 Recycling of foamed PS containers

The world's first! Tray to Tray™

Tray to Tray™ involves collecting used foamed PS containers, breaking them down into raw materials, and recycling them into new trays. FPCO initiated this circular recycling process in 1990.

To page 11

Course 02 Recycling of transparent containers

Distinguish the types of materials by light for recycling.

The recycling of transparent containers began in earnest in 2008.
Near-infrared light is used to sort plastics such as polystyrene (PS), polyethylene terephthalate (PET), and polypropylene (PP) for recycling.

To page 13

Course 03 Recycling of PET bottles and containers

Recycled into safe materials for use with food

The recycling of PET materials began in earnest in December 2010. We produce high-quality recycled materials suitable for food containers and promote circular recycling methods: Tray to Tray™ and Bottle to Transparent Container™.

To page 15

Course 01

Recycling of foamed PS containers

1 Collect

Input

Used trays and containers are gathered at the sorting centers in each district.

White trays

Colored trays

2 Sorted by hand

Manual sorting

After the unrecyclable trays are removed, the remaining trays are sorted into white, colored, and patterned. This step is done by hand!

White trays

3 Trays are ground after removing any small foreign objects

Air sorting & first grinding

The trays are ground after the force of the wind is used to eliminate small foreign objects, such as toothpicks and caps.

4 Wash twice

1st washing / 2nd washing

Ground trays are rinsed in water first and then washed in warm water with detergent.

5 Dehydration after rinsing

Rinsing and dehydration

After being rinsed in fresh water, the ground trays are dehydrated to remove excess water.

6 Grind

2nd grinding

The broken trays are ground down again and turned into smaller flakes.

The water used for cleaning is filtered so that it can be reused!

7 Melt and cut

Melting and Extrusion

Dried flakes are heated until they melt and then transformed into pellets.

8 Turned into rice-like pellets

Pellets

Quality pellets, suitable for food containers, are ready to use as raw material for Eco Tray.

Standards compliance test

The pellets are always inspected for quality!

It has the Eco Mark!

Eco Tray is ready for use!

Course 02

Recycling of transparent containers

1 Input — Collect

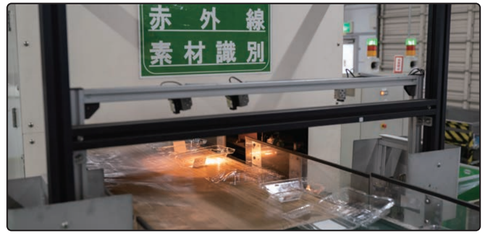
Used transparent containers are gathered at the sorting centers in each district.

2 Pre-sort/order — Manually sorted and neatly arranged by hand

The transparent containers are sorted manually and aligned to ensure the material sorter functions accurately.

3 Sort — Light is used to differentiate the materials.

Near-infrared light can identify the materials in each container and process 8,000 containers per hour.



4 Material identification — Sort by material

The sorter separates materials based on their identified type.

They may look similar, but they are made of different materials

PET

Course 03
See P16 3 for PET bottle and container recycling

BOPS*

It's made of the same material as foamed PS containers and is used to produce the Eco Tray.

*BOPS = biaxially oriented polystyrene

Others

Sent to outside recycling plants. They are used as part of electrical appliances, etc.

5 Washing and grinding — Crushing while washing

They are ground while washing and turned into flakes.

6 Melt and extrude — Melt and cut

Dried flakes are heated until they melt and then transformed into pellets.

Standards compliance test

The pellets are always inspected for quality!

7 Pellets — Turned into rice-like pellets

Quality pellets, suitable for food containers, are ready to use as raw material for Eco Tray.

It has the Eco Mark!

Eco Tray is ready for use!

Course 03

Recycling of PET bottles and containers

1 Collect the PET bottles

Input

Used PET bottles, including those with caps and labels still attached, arrive in compressed bales.

2 Grind after removing foreign objects

Pre-treatment

The compressed plastic bales are unwound to remove materials other than labels, caps, rings, or PET bottles. They are then visually inspected for foreign objects before being crushed.

Automated shifting » Label removal » Material sorting » Manual sorting » Grinding

3 Wash, rinse, and drain

Washing

Any remaining foreign objects, such as caps and labels, are separated in water based on their difference in weight. The materials are cleaned in hot water and detergent and then dried.

Pre-washing » Alkaline washing » Specific gravity separation/ rinse » Draining

4 Further removal of impurities

Volatile fraction removal

The materials are slowly passed through a high-temperature vacuum reactor to remove volatile fractions.

Heating up » Vacuum reactor » Color sorting » Metal removal

Volatile fractions refer to dirt in the flakes.

Standards compliance test

After quality inspections, the materials are delivered to the production plant.

5 Transformed into recycled pellets

Pellets

Food container-grade pellets are ready

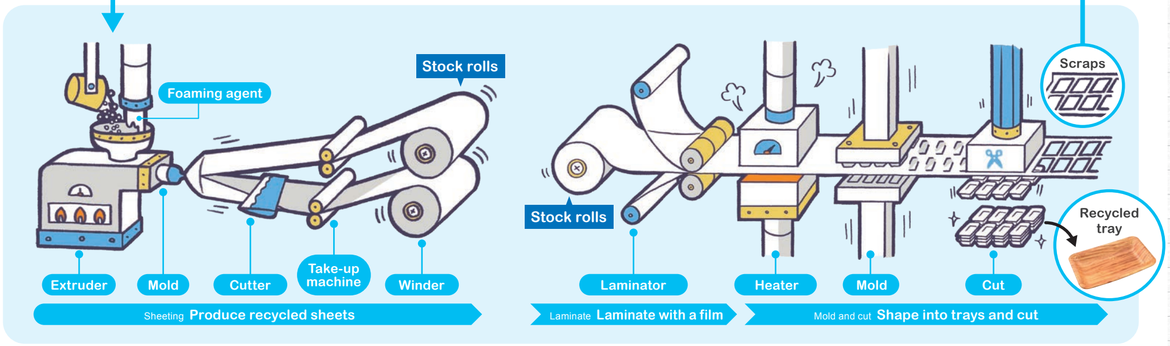
Eco Mark-certified!

Eco APET container is ready!

What can recycling do ?

How recycled raw materials (pellets) become trays

The trays are made by combining recycled raw materials (pellets) from recovered trays with recycled raw materials (pellets) from scraps generated in our plants.
We use resources carefully, never wasting them.



*Eco APET is made with PET materials.

Contribute to environmental conservation

1 Reducing plastic waste

It is important to recycle plastic as a resource, not as garbage. This approach helps reduce littering and the inappropriate dumping of plastic waste, preventing it from polluting the sea.

2 Saving new raw materials

Recycling reduces the use of new crude oil to produce containers, thus protecting the Earth's finite and precious resources.

3 Stopping global warming

CO_2 is a greenhouse gas that leads to the Earth's temperature rise. Recycling reduces CO_2 emissions, helping to stabilize the Earth's temperature.

Contribute to SDGs

It also leads to global goals!

Sustainable society **SDGs**

Adopted at the 2015 UN summit

FPCO recycles its containers because it produces many.

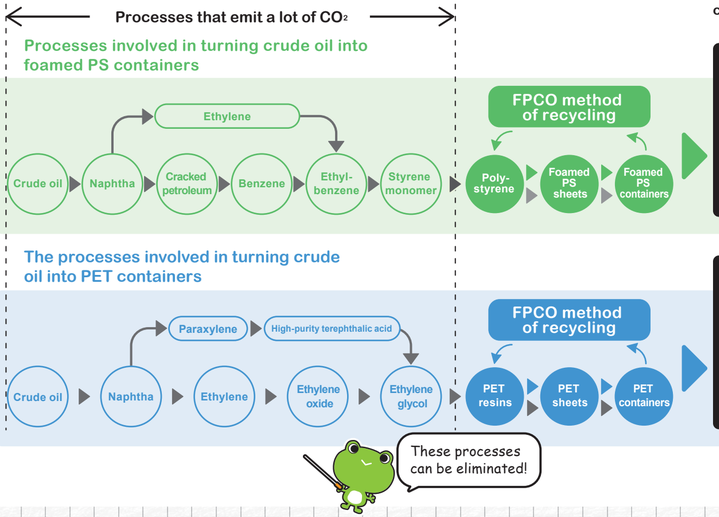
The containers recycled by FPCO have less CO2 emissions.

By everyone bringing trays to the collection box, litter will be eliminated and "the ocean will be cleaner."

Recycling can reduce CO_2 emissions!

How recycling can reduce CO_2 emissions

Extracting raw materials from crude oil to produce containers emits a significant amount of CO_2. FPCO's recycling method of making raw materials from recovered containers eliminates these processes.



Eco-friendly containers

When assessing the environmental impact of containers from material production to disposal and recycling, it was confirmed that ECO TRAY and ECO APET decrease CO_2 emissions compared to containers newly made from crude oil.

Eco Mark

Eco Mark is an environmental label given to all types of products recognized as being environmentally friendly throughout their entire lifecycle, from production to disposal.

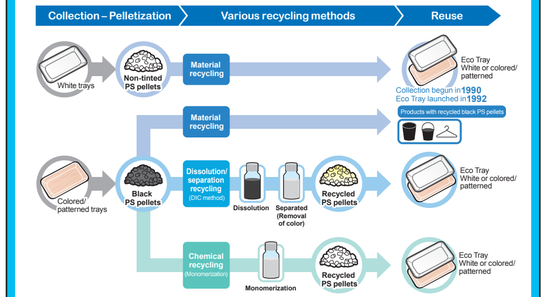
Solar-powered recycling plants

Efforts are made at the plants to reduce CO_2

Solar power, a form of renewable energy, powers all of the machinery at our recycling plants, aiding in the reduction of CO_2 emissions.

Research into new technologies

Colored and patterned trays will also be recycled and transformed into Eco Trays



Research underway towards the complete recycling of polystyrene

The colored and patterned trays, which have previously been recycled into other plastic products like hangers, can now be recycled and transformed into eco-trays thanks to new technology.

Recycling need everyone's support !

Cooperation from everyone is most important.

Correct ways to recycle

Moldy plastics cannot be recycled. Clean and dry them before placing them in the recycling box.

To start

Choose **recyclable** trays

Foamed PS containers

01 Select trays that can be pierced with a toothpick

02 Wash

03 Dry

Transparent containers

01 Select transparent containers that can be recycled

02 Wash

03 Dry

PET bottles

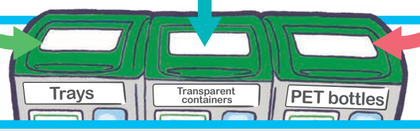
01 Select bottles made for beverages

02 Remove the cap and label

03 Rinse the bottle and let it dry.

Let's **check** together!

04 To the collection boxes



Thanks for your help!

Things that FPCO cannot recycle

FPCO cannot recycle certain items due to their materials and usage. Please check in advance.

Foamed PS containers

Can't be pierced with a toothpick!

Tofu containers

Bento containers

Can be pierced with a toothpick, but can't be recycled!

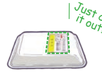
Dirt soaks in and can't be removed.

Cup noodles and cup yakisoba containers
(the ones that can be used with hot water)

Sticky stains are not easy to remove.

Fermented soybean containers

Adhesive is stuck to the surface...



Containers with stickers

Use scissors to cut them out instead of peeling them off.

Transparent containers

Pudding and jelly containers

Colored, semi-transparent containers

Containers with a sticker across the entire surface

Containers for non-food items

Printed containers

Double-check because it's easy to make mistakes!

PET bottles

Seasoning bottles

Detergent bottles

Cosmetics bottles

Colored bottles

We are looking for PET bottles that contained drinks, such as juice and tea!

Fun fact of FPCO and recycling

How much have you learned about recycling?

FPCO Quiz

- Before we conclude, let's recap what we've learned about recycling!
- Examine the clues and consider the answers.

START

Q1
What does FPCO stand for?

A. The letters are the units of large numbers.

B. It stands for the company's initials when it was first established.

Clue!
The company was first named Fukuyama Pearl Paper Manufacturing Corporation.

Q2
What are the trays made from?

A. Crude oil

B. Coal

Clue!
See the answer in P3 "Environment." It says that just a tiny bit of xx is used

Q3
How heavy is a tray?

A. The weight of a 50-yen coin

B. The weight of a 500-yen coin

Clue!
The trays are so light. The lighter one is?

Q4
How long does it take for the tray to become a tray after it is placed in the collection box?

A. About a month

B. About a week

Clue!
There are three steps to the process of making trays: collection, pelleting, and molding, and it takes the cooperation of a lot of people!

Q5
How tall is the stack of trays that FPCO collects in a year?

A. About 9,000 km

B. About 900 km

Clue!
It's about three times the length of the Japanese archipelago.

GOAL!

Q6
What makes up 95% of a foamed PS container?

A. Air

B. CFCs

Clue!
Which is more eco-friendly?

Q1 : B FPCO stands for Fukuyama Pearl Paper Corporation.
Q2 : A The trays are made from polystyrene, which is derived from crude oil.
Q3 : A A tray weighs about 4 grams, and a 500-yen coin weighs about 7 grams.
Q4 : A It takes a month to turn collected trays into new recycled ones, including two weeks for delivery, pelletizing, and internal transportation.
Q5 : A 1.8 billion trays collected in a year would reach a height of about 9,000 kilometers, approximately three times the length of the Japanese archipelago.
Q6 : A The trays are composed of 95% air.

Let's identify the types of plastic with their labels

The plastics we use daily come in a variety of types. If different types of plastic are mixed in the collected containers, they cannot be recycled. Therefore, it's our responsibility to label them correctly for easy identification and proper recycling.

Labels

1 PET

FPCO's material indication

Businesses are required to indicate materials voluntarily.

Material indication

PS

Below the mark for plastics in a JIS Standards symbol

FPCO indicates even the materials!

*The Law for Promotion of Effective Utilization of Resources (recycling law) has mandated the identification of PET bottles since 1991 and other plastic containers and packaging since April 2001.

Material name	① PET Polyethylene terephthalate	② HDPE High-density polyethylene	③ PVC Polyvinyl chloride	④ LDPE Low-density polyethylene
Applications	・PET bottles	・Poly tanks ・Ropes ・Shopping bags (milky white)	・Water pipes ・Rain gutters	・Clear polyvinyl bags ・Mayonnaise and ketchup bottles

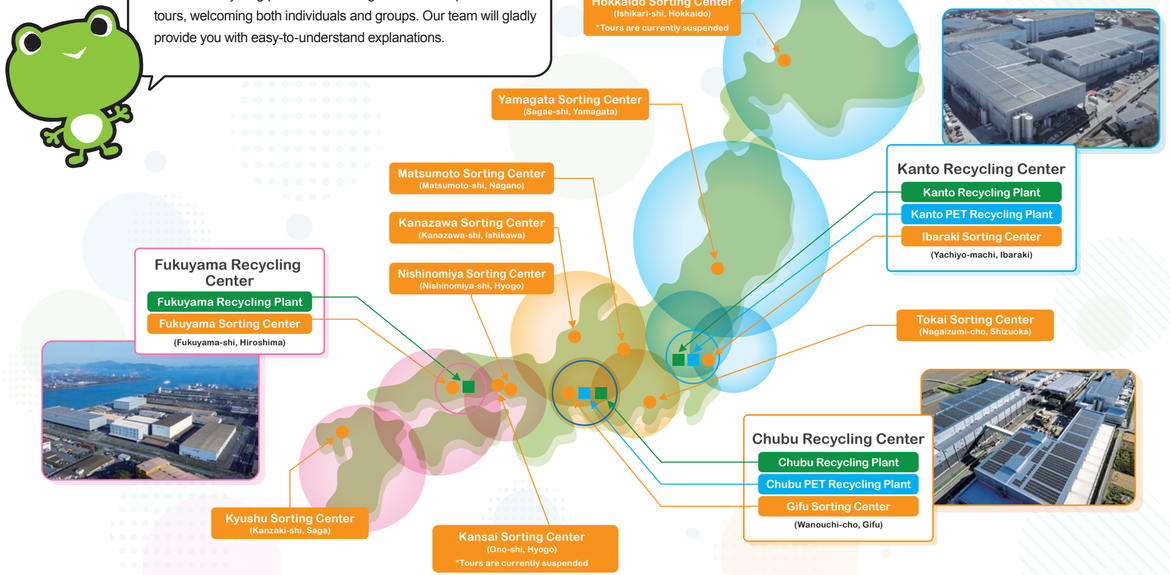
Material name	⑤ PP Polypropylene	⑥ PS Polystyrene	Plastics and composites other than 1 to 6
Applications	・Food containers ・Pudding cups ・Wrapping films	・Foamed PS trays ・Fish boxes ・Dinner table-related sundries	・PP filler containers

Let's visit an FPCO recycling plant!

We have nine facilities across Japan. We look forward to seeing you.

Visit us for a tour!

All of our recycling plants and sorting centers in Japan offer free tours, welcoming both individuals and groups. Our team will gladly provide you with easy-to-understand explanations.



Tour availability

Monday to Friday (excluding holidays) 9:00 to12:00, 13:00 to 16:30

(Opening hours may vary from plant to plant. Please check the times with the plant you are visiting when you book.)

*We also accept online bookings. ▶ FPCO Plant tour

Recycling plants

Used trays collected from supermarkets are sorted and made into reusable raw materials.

Plant	Address	Tour booking number	Maximum capacity per group
Kanto Recycling Plant (Attached to the Ibaraki Sorting Center)	4448 Hiratsuka ,Yachiyo-machi,Yuki-gun,Ibaraki 300-3561, Japan.	Kanto Recycling Plant +81-296-48-0400	100
Chubu Recycling Plant (Attached to the Chubu PET Recycling Plant and Gifu Sorting Center)	511-5 Murahigashi, Namba, Wanouchi-cho, Anpachi-gun, Gifu 503-0231, Japan	Chubu Recycling Plant +81-584-68-2041	60
Fukuyama Recycling Plant (Attached to the Fukuyama Sorting Center)	127-2 Mino-Oki-cho, Fukuyama-shi, Hiroshima 721-0956, Japan	Fukuyama Recycling Plant +81-84-957-2301	130

* If your primary school group exceeds capacity, please contact us to discuss.

Sorting Centers

Used trays collected from supermarkets are sorted and sent to the recycling plant.

Center	Address	Tour booking number	Maximum capacity per group
Yamagata Sorting Center	162 Chuo Kogyo Danchi, Sagae-shi, Yamagata 991-0061, Japan	Yamagata Sorting Center +81-237-85-3645	30
Tokai Sorting Center	307-1 Hattanda, Shimonagakubo, Nagaizumi-cho, Sunto-gun, Shizuoka 411-0934, Japan	Tokai Sorting Center +81-55-980-4571	20
Matsumoto Sorting Center	2267 Shimadachi, Matsumoto-shi, Nagano 390-0852, Japan	Chubu Recycling Plant +81-584-68-2041	15
Kanazawa Sorting Center	204-22 Kita, Fukumasu-machi, Kanazawa-shi, Ishikawa 920-0376, Japan	Chubu Recycling Plant +81-584-68-2041	10
Nishinomiya Sorting Center	1-98-2 Hanshin Ryutsu Center, Yamaguchi-cho, Nishinomiya-shi, Hyogo 651-1431, Japan	Nishinomiya Sorting Center +81-78-907-1288	45
Kyushu Sorting Center	3032-1 Osaki, Kanzaki-machi, Kanzaki-shi, Saga 842-0015, Japan	Fukuyama Recycling Plant +81-84-957-2301	40

Our members at the plant.

Personnel with disability also play an active role.

The ability to "**keep going**" on-site is our precious asset.

We started in

1986

It started long before you were born!

The number of employees with disabilities today

The number of people with disability employed....401
Disability employment rate equivalent.....676
Disability employment rate.....12.6%

*As of March 2025

What do they do?

Recycling sector

They are responsible for sorting used containers, which is the most important process that underpins FPCO's recycling method.

Food container production sector

They are responsible for molding, assembling, inspecting, and packaging food containers.

You can find out more in our eBook!

https://www.fpco.jp/en/en_esg/en_societyeffort/en_handicap/

For a sustainable future for all

Memo

Name

FP CORPORATION

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Tokyo Headquarters	Shinjuku Oak Tower 36F, 6-8-1, Nishi-Shinjuku, Shinjuku-ku, Tokyo 163-6036, Japan	+81-3-5320-0717
Osaka Office	3-6-32 Nakanoshima, Dai Building Main Tower Bldg. 22F, Kita-ku, Osaka 530-0005, Japan	+81-6-6441-2468
Kanto Recycling Plant	4448 Hiratsuka, Yachiyo-machi, Yuki-gun, Ibaraki 300-3561, Japan	+81-296-48-0400
Chubu Recycling Plant	511-5 Murahigashi, Namba, Wanouchi-cho, Anpachi-gun, Gifu 503-0231, Japan	+81-584-68-2041
Fukuyama Recycling Plant	127-2 Mino-Oki-cho, Fukuyama-shi, Hiroshima 721-0956, Japan	+81-84-957-2301

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