

# Fukuoka Prefecture

## Promoting the Creation of a Recycling-Oriented Society with the FRC



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### Situation

Fukuoka Prefecture established the Fukuoka Research Commercialization Center for Recycling Systems(FRC) for the purpose of providing support for research activities conducted by joint research teams formed by industry-academia-government collaboration, and to coordinate with the relevant people to solve any problems. In addition, the prefecture implements awareness-raising activities through workshops and exhibitions to promote the creation of a recycling-oriented society.

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### Action

Here are some examples of recent research achievements.



1. Establishment of a technology which enables the total recycling of waste edible oil
  - Developed a method to separate glycerin, which is produced when waste edible oil is refined into biodiesel fuel, into a glycerin-containing water layer and an oil layer.
  - The glycerin-containing water can be used as a denitrification agent in night-soil treatment plants, while the oil can be used as fuel. This is the first technology of its kind established in Japan, which enables the total recycling of waste edible oil.



2. Construction of a system for recycling used disposable nappies
  - Recycling technologies to process used disposable nappies into raw materials for construction, solid fuel and soil improvement goods have been established.
  - In addition to recycling used disposable nappies collected from businesses, some municipalities in Fukuoka prefecture are collecting them separately from other waste.
3. Establishment of a production technology to make natural human-type ceramide from soy sauce lees
  - A technology has been established to extract natural human-type ceramide, which can be used as an ingredient for cosmetic products, from soy sauce lees. After extracting the ceramide, the soy sauce lees can also be used as livestock feed.
  - Since large amounts of soy sauce lees are generated at one place in Fukuoka prefecture, it is possible to collect them at low cost.
  - This natural human-type ceramide has already been used in some cosmetics products.