

Taiyo Oil and Mitsui Chemicals Consider Collaborative Efforts to Expand the Supply of Chemically Recycled Products

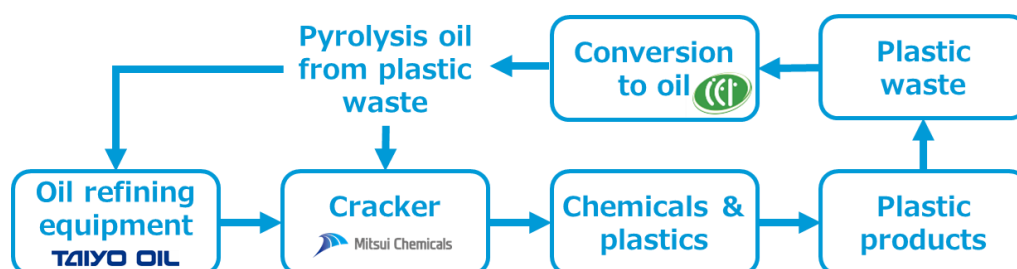
Taiyo Oil Co., Ltd. (Tokyo; President & CEO: YAMAMOTO Takahiro) and Mitsui Chemicals, Inc. (Tokyo: 4183; President & CEO: HASHIMOTO Osamu) today announced that they have started a collaborative study, aimed at transitioning to a circular economy.

Taiyo Oil obtained ISCC PLUS certification in June 2025 at its Shikoku Operations (Imabari, Ehime), and in July 2025 at its headquarters. The company is also constructing facilities to receive pyrolysis oil derived from plastic waste and other feedstocks to launch chemical recycling utilizing its refinery infrastructure^{*1}.

Mitsui Chemicals has been introducing bio-based hydrocarbons into its cracker at its Osaka Works (Takaishi, Osaka) and has started manufacturing and marketing plastics and chemicals using the mass balance approach since December 2021^{*2}. In addition, Mitsui Chemicals has been introducing pyrolysis oil derived from plastic waste which is procured from CFP CORPORATION (Fukuyama, Hiroshima; CEO: FUKUDA Namie) into its cracker and has begun manufacturing and marketing chemically recycled plastics and chemicals using the mass balance approach since March 2024^{*3}.

Now, this collaborative study between Taiyo Oil and Mitsui Chemicals represents the next step for both companies, aiming to expand the supply of chemically recycled products. Specifically, the study aims to have Taiyo Oil's Shikoku Operations handle the heavy fraction of pyrolysis oil from plastic waste, which is difficult for Mitsui Chemicals to process with its crackers. Chemically recycled naphtha, propylene and other products based on the mass balance approach will then be supplied to Mitsui Chemicals. Efforts will also be made to expand the range of waste plastic feedstocks that can be utilized. Further, the two companies will study to expand the supply of bio-based products.

Taiyo Oil and Mitsui Chemicals hope that this collaborative study will help to bring about a society that is not just sustainable but regenerative.



Conceptual diagram of potential collaboration

■ **Mass balance method**

The Ministry of the Environment's Roadmap for Bioplastics Introduction defines the mass balance approach as "A method in which, during the process of turning raw materials into final products and the distribution process (chain of custody), raw materials with certain properties (e.g., bio-based raw materials) are mixed with raw materials that do not have the properties (e.g., fossil-based raw materials); thus, the properties are assigned to a portion of the product according to the amount of input of the raw materials with those properties."

The physical properties of plastics and chemical products made under the mass balance method do not differ whatsoever from their fossil-derived counterparts. The mass balance method also allows for the use of biomass in the production of materials where it has traditionally been difficult. As a result, the mass balance method is an important means of increasing society's adoption of biomass and realizing a carbon-neutral society.

Taiyo Oil aims to supply chemical products derived from biomass resources through the mass balance approach. Mass balance also has a crucial role to play in chemical recycling, which is set to be rolled out as a recycling solution that will pave the way for a circular economy.

*1: Taiyo Oil news release (September 4, 2025) (Japanese only)

<https://www.taiyooil.net/news/2025/25-050.html>

*2: Mitsui Chemicals news release (December 14, 2021)

https://jp.mitsuichemicals.com/en/release/2021/2021_1214/index.htm

*3: Mitsui Chemicals news release (March 22, 2024)

https://jp.mitsuichemicals.com/en/release/2024/2024_0322/index.htm

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