2024/12/26

Kao Began Supplying Saccharification Enzymes “CRESCENTIS™” *1 to the Research Association of Biomass Innovation for Next Generation Automobile Fuels for Research into Producing Bioethanol for Automobiles

Kao began supplying saccharification enzymes to the completed facility*2 of the Research Association of Biomass Innovation for Next Generation Automobile fuels based on the ″Agreement on the Use of Saccharification Enzymes in Bioethanol Production Research Facilities ″*3 concluded with the Association in 2023.

*1 https://chemical.kao.com/global/bio/crescentis/

*2 https://rabit.or.jp/news/113/

*3 https://www.kao.com/global/en/newsroom/news/release/2023/20230621-001/

■Utilizing Kao’s Saccharification Enzymes at the Association’s Bioethanol Production Facility

The Association research at the facility in Okuma, Fukushima Prefecture to research utilizing non-edible plant-based resources as a raw material for bioethanol. A four-step process is developed to produce bioethanol: pre-treating of biomass; using saccharification enzymes to break down the biomass into sugars; fermenting the sugars by adding yeast to produce ethanol; and distilling and refining the fermented ethanol (Figure 1). In the second step, saccharification enzymes developed by Kao will be used to break the biomass down into sugars.

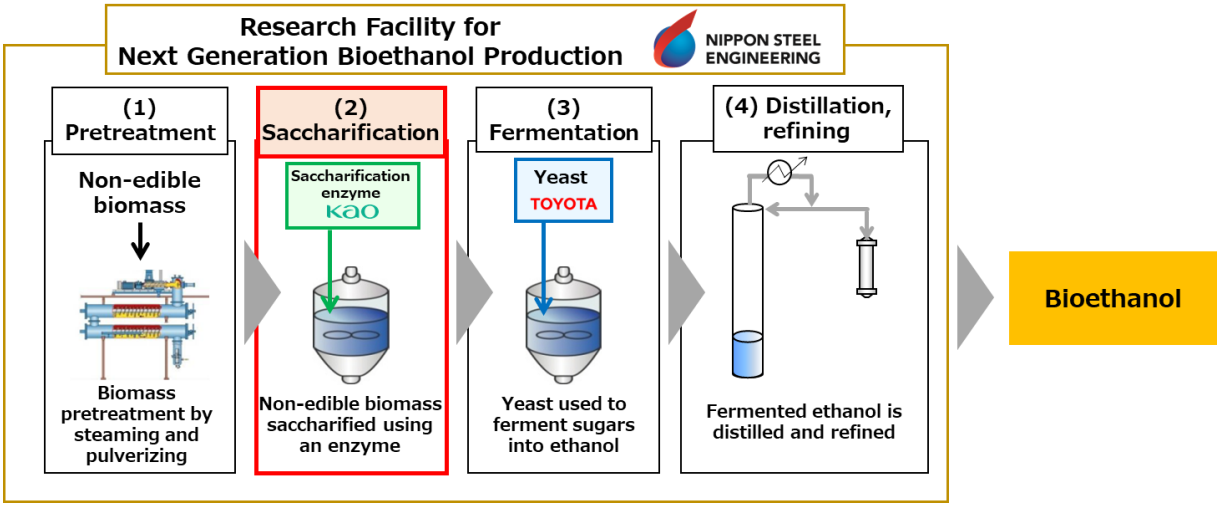

Figure1. Process for producing ethanol from biomass

■Summary

Kao has conducted research and development into developing and manufacturing its distinctive enzymes and used those enzymes in its own products. Given the increasing use of biomass and the growing need for high-performance saccharification enzymes. Kao plans to produce saccharification enzymes necessary for bioethanol fuel production to meet the needs of customers in Japan and abroad, in the expectation that this will help reduce industry CO_2 emissions and contribute to creating a sustainable future.

■Inquiries

https://kaochem.my.site.com/inquiry/s/global