



**Mitsui Chemicals**

<http://www.mitsui-chem.co.jp/e/>

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Mitsui Chemicals, Inc.

### Catalyst Development for Propylene Glycol Production from Glycerin

Mitsui Chemicals, Inc. ("MCI") today announced the development of a high-performance catalyst for manufacturing propylene glycol from glycerin, made possible by expanding catalysis technologies that the company has acquired through its R&D activities. This new catalyst exhibits high activity and high selectivity, which enables the production of propylene glycol with a high yield of 95% or more.

In 2007, global demand for propylene glycol, which is mainly applied to unsaturated polyester, antifreeze liquid and additives for liquid detergent, stood at 1,500,000 tons. Glycerin, which is a by-product generated during the process of manufacturing biodiesel fuel, has been gathering public attention these days as a renewable resource. Output of biodiesel fuel has been steadily expanding so far, and its production is also forecasted to strongly grow in the future. In line with production growth for biodiesel fuel, the volume of glycerin as a by-product is projected to increase going forward. Against this backdrop, technology for manufacturing propylene glycol from glycerin is being intensively studied worldwide toward its eventual realization.

This technology has now entered the catalyst life test and manufacturing process development phases. Looking ahead, MCI will further accelerate the development of the technology toward attaining its commercial viability.

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## **About Mitsui Chemicals**

Mitsui Chemicals aspires to be a “Chemistry, Innovation, Dreams” driven Mitsui Chemicals which is constantly pursuing innovation and materializing dreams with the wonder of chemistry, and making an all-out and company wide effort to achieve this end. With aggressive business deployment in the Performance Materials, Advanced Chemicals and Basic Chemicals business fields, Mitsui Chemicals’ main products have successfully shown the presence in their targeting markets (Japan, Asia, World). Mitsui Chemicals has approximately 13,000 employees around the world, and posted sales of 1,786.7 billion yen in fiscal 2007.

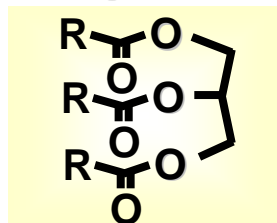
Mitsui Chemicals shares are traded on the Tokyo Stock Exchange in Japan.

Further information on Mitsui Chemicals is available on the Internet at <http://www.mitsuichem.com>

# Catalyst Development for Propylene Glycol Production from Glycerin

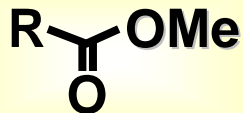
## Glycerin: A Potential Renewable Feedstock

Vegetable Oil

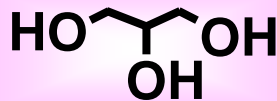


ex. palm oil, rapeseed oil, soybean oil, ...

Biodiesel Fuel (BDF)

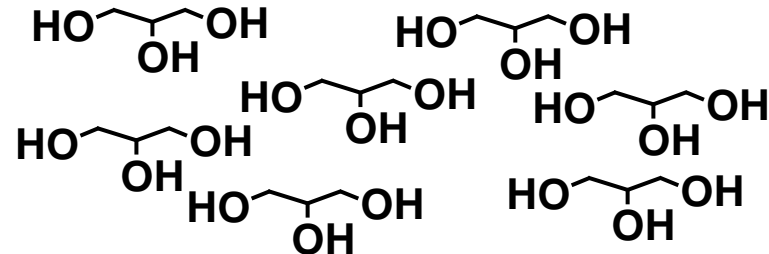


**Glycerin**



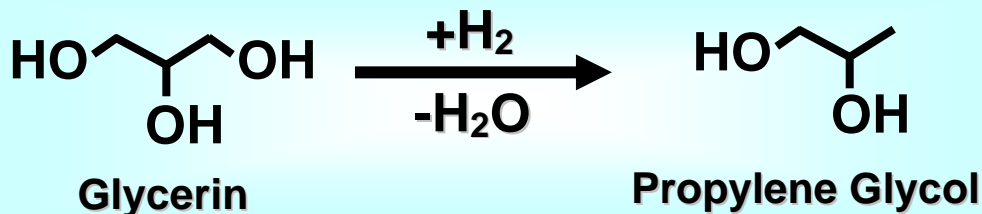
### Surplus Glycerin

due to BDF Production Increase



Technology for the Beneficial Use of Glycerin is Required

## Glycerin Conversion to Propylene Glycol



- Mitsui Chemicals has Developed a High Performance Catalyst
- High Yield (> 95%) Propylene Glycol

Propylene Glycol

Global Demand: 1.5 Million Tons (2007)

Applications:

- Unsaturated Polyester
- Antifreeze
- Liquid Detergent
- Food/Drugs/Cosmetics
- Others