

Analysis of GTL fuel characteristics as an automobile diesel

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Nowadays, we faced with the severe problem of energy security due to increasing price of crude oil. For this reason, the new synthetic fuel has been studied by many research groups worldwide. GTL (gas-to-liquid) fuel produced by the Fischer-Tropsch reaction of carbon monoxide (CO) and hydrogen (H₂) is expected to be one of the eco-friendly biomass based alternatives and blended to petrodiesel.

In this study, the characteristic of the fuel was analyzed by its concentration differences after blending petrodiesel in domestic market with different amounts of GTL which produced from Shell. Gas Chromatography shows that GTL is consist of longer paraffin chain than common diesel. GTL have high flash point, distillation curve, kinematic viscosity, and derived cetane number. In addition, it showed that the lubricity of GTL decreased due to low sulfur contents.