바이오디젤 연료유의 산화특성 연구

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Biodiesel and biodiesel blend fuel are receiving increasing attention as alternative fuels for diesel engines without substantial modifications. Biodiesel and blend fuels have been widely studied and applied in diesel engine because of biodiesel's lower sulfur, lower aromatic hydrocarbon and higher oxygen content. Biodiesels have the potential to be oxidized in several conditions. It has reported that oxidation deterioration of biodiesel is different in the condition of storage and oxidation causes chemical property change of methyl esters. Sunlight intensity, temperature, material of container and contact surface with oxygen are key dominant factors acceleration oxidation deterioration.
In this study, we chose temperature among key oxidation conditions and metal container filled with biodiesel was heated at about 110℃ for 10 days in order to accelerate oxidation deterioration. We conducted experiments of density, kinematic of viscosity, total acid number, cetane number and etc, about BD100 and blend fuel(BD10).