

Fuel Chemistry Laboratory

The Fuel Chemistry Lab has the capability to perform diesel fuel and biodiesel analysis and characterization in accordance to ASTM protocols. It is also equipped with other instrumentations for cold-flow properties study of biodiesel such as Cold Filter Plugging Point Analyzer and Polarized Light Microscope with Linkam Temperature Control System.

Oil Analysis Laboratory

The Oil Analysis Lab is equipped with Inductively Coupled Plasma and Fourier Transform-Infrared Spectrometer.

Engine Performance Laboratory

Has the capabilities of performing comprehensive benchmark testing relating to engine dynamics in evaluating fuel efficiency and performance and durability testing. The Engine Performance Lab is equipped with Taylor TD 3100 Engine Dynamometer, Taylor TD-36 Chassis Dynamometer and Small Engine Test Cells (with Honda GX 160 5.5 HP engines and 5HP Hatz diesel engines). The Center has also acquired a brand new 440KW AC Dynamometer.

Emission Facilities

The Center is using an AVL SESAM FT-IR Emission Analyzer with the capability of monitoring more than 25 emission gases in real time. The Analyzer also features an FID Detector for total hydrocarbon measurement, a Paramagnetic Detector for Oxygen measurement and a Micro Soot Analyzer.

MSU-Northern Biodiesel Pilot Plant

Features all unit operations typically found in an industrial scale biodiesel plant. The plant is very suitable for training, optimization and process development studies using various feedstock.

Oilseed Pressing Facilities

The Center also houses five (5) Kern Kraft 40 Screw Presses with a total capacity of 5 tons/day and a 40 L capacity filter press.

ROLES and GOALS



Research-based Training and Education

Biodiesel Testing (ASTM D6751)

Product Verification

