

# Biodiesel Standards - EPA Background and Objectives



EPA Office of Transportation and  
Air Quality

# Why is Biodiesel Important?

- Biodiesel production is a small, but rapidly growing percentage of total diesel fuel production
- Biodiesel production is also becoming very widespread, particularly due to state mandates and incentives
- However, rapid growth in biodiesel production has raised concerns about biodiesel quality

# Biodiesel Quality Concerns

- Primary EPA and industry standard for pure biodiesel is ASTM D 6751
- Recent testing surveys have indicated that a significant percentage of commercial biodiesel did not meet ASTM D 6751 specifications, primary concerns were
  - Excessive glycerin content (glycerin is a byproduct of the manufacturing process)
  - Biodiesel stability (when stored over time, can form degradation products detrimental to vehicle fuel system performance)
- Splash blended biodiesel may not blend homogeneously with petroleum diesel, particularly in cold weather – tank stratification may cause consumers to get biodiesel blends containing much more or much less biodiesel than advertised

# How is Biodiesel Treated in EPA Regulations?

- Under the Clean Air Act, EPA has responsibility for registering fuels and fuels additives
  - We have registered a range of renewable fuels and continue to look at new fuels such as renewable diesel
- Biodiesel is registered with EPA as a motor vehicle diesel fuel and motor vehicle diesel fuel additive
- Biodiesel can be used in diesel engines when blended with petroleum-based diesel at any concentration between 0 and 100 percent (B100)
- All biodiesel producers must register with EPA, and must provide certain information as part of their registration

# EPA Requirements for Biodiesel Producers

- Biodiesel producers must supply the following information when registering with EPA
  - Feedstocks used to produce their biodiesel
  - Description of their biodiesel manufacturing process
  - Emissions and health effects testing data for their biodiesel (typically provided by showing proof of registration with the National Biodiesel Board)
  - Test result from representative sample showing their biodiesel meets ASTM D 6751
- Biodiesel producers must also comply with all other EPA standards (sulfur, cetane/aromatics, etc.) and requirements (recordkeeping, reporting, etc.) for diesel fuel

# EPA Actions to Promote Biodiesel Quality

- Initiated stakeholder discussions to determine appropriate regulatory and non-regulatory actions to address biodiesel quality concerns
- Working closely with industry to develop new guidance document summarizing EPA's regulatory requirements for biodiesel producers and biodiesel blenders
- Plan to conduct field testing to help ensure biodiesel producers meet ASTM D 6751
- Also working closely with industry and other government organizations to coordinate emissions testing program to develop accurate assessment of biodiesel effect on emissions

# Fuel Standards Harmonization - EPA Activities

- Collaborating with several standard-setting organizations to harmonize standards for biofuels
- Participating in DOE/ANSI workshops to assess and develop U.S. biofuels standard
  - Participating in ASTM efforts to update/improve ASTM D 6751, and also develop ASTM standard for blends of biodiesel and petroleum diesel
- Also participating in international workshops to develop compatible biofuels standards internationally

# Fuel Standards Harmonization – Basic Principles

- Build upon existing regulatory framework
- Address concerns over operational and environmental performance of biofuels and avoid creating new ones
- Refer to fuel quality specs to ensure high quality fuel
- Focus on harmonizing performance standards for biofuels to ensure acceptable emissions levels