

## BIOFUELS

### DO MORE. FUEL MORE. COMPREHENSIVE SOLUTIONS FOR BIOFUEL ANALYSIS AND A BRIGHTER FUTURE.

The world's energy needs are changing rapidly.



With the rise in industrialization and population growth the world's energy needs are projected to continuously increase over the next 20 years. This growth coupled with the escalating price of oil, concerns over CO<sub>2</sub> emissions and the search for independency from crude oil imports has led to elevated interest in the development and production of renewable energy technologies. Leading this revolution are two biofuels – biodiesel and bioethanol, both derived from natural, replenishable resources.

Biodiesel is a fuel source made from animal or vegetable fats and oils, and alcohol with it's primary feedstocks being repeseed, sunflower and soybean. Today, biodiesel can be used as a pure fuel or blended with petroleum in any percentage. B20 (a blend of 20 percent by volume biodiesel with 80 percent by volume petroleum diesel) is one of the most commonly used blends in the United Stayes. Bioethanol, on the other hand, is a fuel source made from a various sugarbased crops such as sugarcane, sugar beet and corn. Historically, Brazil has been the largest producer of bioethanol, but this is now rivaled as production levels in the United States increase. Total global substitute of crude oil with Biofuels is estimated to grow to 10% within the next decade.

#### Industry Standards driving quality Biofuels

The Biofuel industry is strictly regulated by national and international Standards and regulative bodies like ASTM, CEN or APN. Because of this, the use of analytical equipment is essential to ensuring quality control. The values for free and total glycerin are one of the major quality issues faced in the development of B100 biodiesel. High content of free and total glycerin can lead to buildup in fuel tanks, clogged fuel systems injector fouling and valve deposits. As the content of methanol is a major value in risk classification of the product in terms of transportation and security, it's critical to get accurate results. How can your business remain compliant yet productive?



### **Call on EcoAnalytix from PerkinElmer**

As part of our EcoAnalytix initiative, we have developed a full suite of biodiesel and bioethanol solutions to make it easier for you to keep pace with the evolving biofuels industry. We have combined tailored product systems, standard operating procedures and application notes with our service and support, to ensure that from trace metals to methanol testing, your laboratory has the right application based measurement system to operate smoothly. Our portfolio of solutions can help in the development and testing of:

- FAME composition
- FAME blend
- Glycerin and methanol
- Trace metals
- Oxidation stability
- <sup>14</sup>C determination
- Alcohol content
- Fermentation

To learn more about Biofuels solutions visit [www.perkinelmer.com/biofuels](http://www.perkinelmer.com/biofuels)

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