

U.S. Fire Administration / National Fire Academy

Warning: Hot Coffee!

Topic: Biodiesel Products and Manufacturing

Learning objective: The student shall be able to identify sources for biodiesel product and manufacturing information.

As fuel prices continue to rise, more and more backyard inventors will tinker with ideas to discover low-cost alternatives to gasoline and petroleum-based diesel.

One product that has some market potential is “biodiesel,” a motor vehicle fuel created from one or more organic products such as soy, corn, grasses, or animal fats. The home operation in the photograph used recycled cooking oil from a fast food restaurant to make biodiesel.

While the finished product may resemble a Class IIIB combustible liquid, the manufacturing process itself may involve significantly more hazardous materials. To make biodiesel, an alcohol (Class IB) and base are required. Generally, ethanol or methanol are mixed in a sodium hydroxide solution. If not mixed properly under strictly controlled conditions, an exothermic reaction may cause a small deflagration.

To learn more about biodiesel products and manufacturing, you might want to visit some of these Web sites:

American Ag Fuels ----- www.americanagfuels.com
 Ag Processing, Inc. ----- www.agp.com
 Biotane Fuels ----- www.biotanefuels.com
 Grease Works Cooperative ----- www.greaseworks.org
 National Biodiesel Board ----- www.biodiesel.org
 Pacific Biodiesel ----- www.biodiesel.com
 Smithfield BioEnergy ----- www.bestbiofuels.com



If you are asked to be involved in the review and approval of a biodiesel or other alternative fuel manufacturing or storage operation, you may want to obtain qualified, third-party technical assistance to help you with the approval process.

This unauthorized biodiesel manufacturing operation had the potential for serious fire.
 Photo courtesy of New Jersey Division of Fire Safety/State Fire Marshal's Office.