



How to Mix Your Biodiesel

Follow these easy steps to find out how you can measure your catalyst correctly, safely mix it into the methanol and add the mixture to your oil to make your biodiesel.

Steps

1 Ensure safety first. You are working with some chemicals and vapors that could be dangerous if handled incorrectly. It is very important for you to wear the proper safety equipment and work in a well-ventilated area. Make sure to wear rubber gloves and face shield at all times. The tiny dust particles in the potassium hydroxide could cause irritation and damage if inhaled. The face shield and dusk mask will help keep the dust particles and any chemical splash away from your face.

2 Measure the catalyst. For each liter of oil you're going to turn into biodiesel, you need seven grams of potassium hydroxide. In addition to that, you need to add "extra" grams of potassium hydroxide equal to the titration. To break it down nice and easy: if your oil titrates at 2, you need 7 plus 2 or 9 grams (0.071 or 0.32 oz) of potassium hydroxide for each liter of oil. Place the plastic container on the scale and fill it with the correct amount of potassium hydroxide.

3 Mix the methoxide. When you have measured out the amount of potassium hydroxide you will need for your batch of biodiesel, grab your funnel and place it on the container with the methanol. Make sure the amount of methanol you use is 20% to 22% of the original volume of your batch of oil. Pour in the potassium hydroxide and let it settle.

- Place the valve cap on the container of methanol.
- As the potassium hydroxide dissolves into the methanol, the mixture will heat up and boil. Bubbles will appear on the bottom of the plastic container. Hold the plastic container away from you and open the valve to release the vapor pressure. These vapors can be very dangerous if inhaled, so keep the end of the container an arm's length away from your face shield as you release the vapors.
- Release the vapors about every 20 seconds until the potassium hydroxide is completely dissolved. You can tell by looking at the bottom of the container.
- Once dissolved, you can add this "methoxide" to the oil in your processor.

4 Add methoxide to the heated oil. The oil in your processor should be heated to somewhere between 120 and 130 degrees Fahrenheit before you add the methoxide. The heat cannot rise above 140 °F (60 °C) because it will cause the methanol to boil. Slowly add the methoxide into the processor. it should be added relatively slowly; taking about five or ten minutes to add into the oil through an inlet to the pump.

- Drain the glycerin waste product from the mix. Your oil will change from dark (glycerin) to light (crude biodiesel) in color as it is drained.

5 Water-wash. After all the glycerin is drained (up to 24hours), turn on the pump and add water to the oil to start the water wash. Keep it simple. You need 5% of the original oil volume and let the water circulate in the tank for about 15 minutes. If you have 40 gallons (151.4 L) of oil, you need two gallons of water. Let this circulate and then replace the dirty water with clean... repeat these steps until the water stays clearer as you have washed out many of the impurities out of the oil. You may then finally dry you fuel to remove any water suspended in it. Heat the fuel and ideally recirculate by spraying it back in. This will dry the fuel a lot quicker. When you take sample ensure that the fuel

is bright and clear. Keeping drying it for a further 15 minutes to ensure when it cools it remains water free.

Can you answer these readers' questions?

[Refresh](#)

On **How to Hook up a Windows 7 Computer to a TV**, a reader asks:

How do I play TV on my laptop using my setup box connected to my laptop via HDMI? Is there a player available for this and what is the process?

[Reply](#)

On **How to Find if a Website Is Legitimate**, a reader asks:

How do I find out if a specific website is legitimate?

[Reply](#)

On **How to Apply for a CCW in California**, a reader asks:

How much does a CCW cost?

[Reply](#)

Tips

- Note: *Titration* is a test to determine the amount of free fatty acids in your used oil.
- Note: *Methoxide* is an organic salt in powder form and it is a product of mixing methanol and sodium hydroxide.
- For detailed biodiesel handling guidelines, go to [NREL](#).

Things You'll Need

- Face shield
- Rubber gloves
- Potassium hydroxide
- Plastic bowl
- Funnel
- Large plastic container with valve
- Methanol
- Scale
- Biodiesel processor
- Water

Sources and Citations

- Original source of article, [VideoJug](#). Shared with permission and appreciation.
- <http://www.docstoc.com/docs/7838718/Build-a-Biodiesel-Processor>

Made Recently



Uploaded 2 years ago

