



DarkStar VI – 841 St Louis Rd. Collinsville, IL 62234 – [www.BiodieselGear.com](http://www.BiodieselGear.com)

## Two Stage – Base/Base Process

Rewritten/condensed from [“The Two stage adaptation of Mike Pelly’s biodiesel recipe”](#) by Aleks Kac located at [http://journeytoforever.org/biodiesel\\_aleks.html](http://journeytoforever.org/biodiesel_aleks.html)

This process is designed for use with waste vegetable oils (WVO).

### First Stage

1. Filter and measure the desired amount of WVO into the reaction vessel.
2. Heat the WVO to 50C (hold this temp)

While the WVO is heating, prepare the Methoxide.

- 25% Methanol/liter WVO
- 6.25 grams of Sodium Hydroxide/liter of WVO .

(Example: *If you are processing 100 liters of WVO your Methoxide will consist of 25 liters of Methanol and 625 grams of NaOH.*)

3. Introduce 75% of the prepared Methoxide into the reaction vessel
4. Mix vigorously for 1 hour.
5. Remove the heat and let the mixture settle for 12 hours or overnight.

*The next day...*

6. Drain the glycerol from the reaction vessel (fairly thin this time).

### Second Stage

7. Heat the feedstock to 50C (hold this temp)
8. Introduce the final 25% of the prepared Methoxide into the reaction vessel.
9. Mix vigorously for 1 hour.
10. Remove the heat and let the mixture settle for 12 hours of overnight.

*The next day...*

11. Drain the glycerol from the reaction vessel (very heavy and thick stuff this time).

**Note:** Between the glycerol and biodiesel layers there will be a thin layer of creamy colored stuff consisting of various settled waxes. This stuff should not be processed further but discarded.

Now you can wash, dry and filter your Biodiesel.