Advanced Chemistry Biodiesel Test Review

Part 1: Please refer to the following diagram to answer the questions.



Part 2: Short Answer – Please answer neatly in complete sentences.

11. (4pts) Why did Rudolf Diesel originally promote his diesel engine? How did he do this?

12. (4pts) Why is it necessary to wash the biodiesel? What happens if the biodiesel is shaken too aggressively while washing?

13. (4pts) What is transesterification? Explain why the chemical reaction to make biodiesel is a transesterification process.

- 14. (4pts) What particular disadvantage would people living in cold weather climates need to consider when using biodiesel? Which oil tested in our lab would be the best to use in cold weather, and what evidence can we use to conclude this?
- 15. (3pts) List three benefits of using biodiesel as an alternative fuel?

16. (3pts) List three disadvantages, BESIDES cold weather properties, of using biodiesel as an alternative fuel?

17. (8pts) Make a sketch of the YOUR bottle containing the biodiesel the day after making it. If you made more than one oil type, you may describe either result. Be sure to: indicate which vegetable oil you used, show the approximate amounts of each layer in the bottle, describe what each layer looked like (color) and identify what each layer is.

18. (8pts) List four ways that biodiesel made from different vegetable oils may have different properties. Provide specific evidence seen in class to explain this answer.

19. List 4 reasons why it is not advised to make your own biodiesel.



