FLINN SCIENTIFIC

Name_____

Laboratory Report

Preparation of Biodiesel

Volume of Biodiesel Produced	
Color and Appearance	

Heat of Combustion

	Trial 1	Trial 2
Mass of the Calorimeter		
Mass of Water and Calorimeter		
Initial Mass of Burner and Biodiesel		
Initial Temperature of the Water		
Final Temperature of the Water		
Final Mass of Burner and Biodiesel		
Average Value of Heat of Combustion		

1. Calculate the change in the temperature of the water and the mass of fuel consumed.

2. Calculate the amount of energy absorbed by the water in the calorimeter.

3. Calculate the heat of combustion of the fuel by dividing the energy absorbed by the water by the mass of fuel consumed. Report the result in kilojoules per gram.

4. Calculate the average heat of combustion value for the two trials. The reported value for the heat of combustion for biodiesel is 42.5 kJ/gram. Describe at least two sources of experimental error that might account for the difference between your value and the expected value.

5. Would the measured heat of combustion for biodiesel be higher or lower than the reported value if the fuel continued to burn after it was moved away from the colorimeter?