Data Table

Part A. Data Table

Volume of biodiesel fuel produced	_____ mL
Color and Appearance	

Part B. Data Table

	Sample #1	Sample #2
Mass of the can	g	g
Mass of water and calorimeter	g	g
Initial mass of Petri dish and fuel	g	g
Initial temperature of the water	°C	°C
Final temperature of the water	°C	°C
Final mass of Petri dish and fuel	g	g
Average value heat of combustion	kJ/g	

Calculations and Post-Lab Questions *(Answer on a separate sheet of paper.)*

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 can.

3. Calculate the heat of combustion of the fuel from the change in energy of the water and the mass of fuel consumed, in kilojoules/gram.

4. Average the heat of combustion values for the two samples and enter this value in the Data Table. The accepted value for the heat of combustion for most biodiesel fuels is 42.5 kJ/gram. How do you account for the difference between your value and the expected value?

5. List some potential sources of error if

   a. the heat of combustion value was too small.

   b. the heat of combustion value was too large.