

REPORT
BOMB CALORIMETRY EXP.

NAME _____
SECTION _____

A. Determination of Heat Capacity

Mass of Benzoic acid + thread, (g)	0.7934
Mass of thread, (g)	0.0047
Mass of Benzoic acid, (g)	
Final temperature, (°C)	17.107
Initial temperature, (°C)	15.070
ΔT , (°C)	

Write the balanced equation for the combustion of one mole of Benzoic acid:

_____ $\Delta n =$

Heat capacity of the calorimeter _____

SAMPLE CALCULATIONS (use separate sheets if necessary)

REPORT FOR BOMB CALORIMETRY EXP. (cont.) NAME _____

B. Straight Chain Alcohols

	Propanol	Butanol	Pentanol
Mass of sample + Crucible, (g)	11.6465	11.7158	11.7357
Mass of Crucible, (g)	10.8902	10.8925	10.8997
Mass of sample, (g)			
Final temperature, (°C)	22.086	22.091	20.031
Initial temperature, (°C)	19.624	19.230	16.972
ΔT , (°C)			
Molar enthalpy of combustion			

Write a balanced equation for the combustion of one mole of each compound.

1. _____ $\Delta n =$

2. _____ $\Delta n =$

3. _____ $\Delta n =$

SAMPLE CALCULATIONS (use separate sheets if necessary)

REPORT FOR BOMB CALORIMETRY EXP. (cont.) NAME _____

C. Cyclic compounds

	Cyclohexane	Cyclohexene	1,4-Cyclohexadiene	Benzene
Mass of sample + Crucible, (g)	11.7403	11.7017	11.5666	11.6982
Mass of Crucible, (g)	10.8978	10.8977	10.8990	10.8993
Mass of sample, (g)				
Final temperature, (°C)				
Initial temperature, (°C)	20.986	21.370	23.779	20.879
ΔT , (°C)	17.203	17.825	20.891	17.662
Molar enthalpy of combustion				

Write a balanced equation for the combustion of one mole of each compound:

1. _____ $\Delta n =$

2. _____ $\Delta n =$

3. _____ $\Delta n =$

4. _____ $\Delta n =$

SAMPLE CALCULATIONS (use separate sheets if necessary)