**Marks
4**

- A mass of 1.250 g of benzoic acid, $C_7H_6O_2$, underwent combustion in a bomb calorimeter. The heat of combustion of benzoic acid is –3226 kJ mol^{-1}. What is the change in internal energy during this reaction?

Answer:

If the heat capacity of the calorimeter is 10.134 kJ K^{-1}, calculate the temperature change that should have occurred in the apparatus.

Answer: