

- A mass of 1.250 g of benzoic acid ($C_7H_6O_2$) underwent combustion in a bomb calorimeter. If the heat capacity of the calorimeter was 10.134 kJ K^{-1} and the heat of combustion of benzoic acid is $-3226 \text{ kJ mol}^{-1}$, what is the change in internal energy during this reaction?

Answer:

Calculate the temperature change that should have occurred in the apparatus.

Answer: