College Prep Chemistry of the Earth System

Assignment 2I 20 Points

Calorimetry

Solve the following calorimetry problems

1. c_{water} = 4.184J/g°C, m = 100.0g, T_{final} = 89.3°C, T_{ini} = 100.0°C, q_{water} = ____J

   q_{metal} = _____J ($q_{metal} = -q_{water}$)

2. c_{water} = 4.184J/g°C, m = 100.0g, T_{final} = 69.2°C, T_{ini} = 100.0°C, q_{water} = ____J

   q_{metal} = _____J ($q_{metal} = -q_{water}$)

3. q_{food} = -4923.6J, q_{water} = ____J ($q_{water} = -q_{food}$)

   m_{water} = 100.0g, C_{water} = 4.184J/g°C
   ΔT = ____°C

4. q_{food} = -9215.2J, q_{water} = ____J ($q_{water} = -q_{food}$)

   m_{water} = 100.0g, C_{water} = 4.184J/g°C
   ΔT = ____°C