

1. If a sample of chloroform is initially at 25°C , what is its final temperature if 150.0 g of chloroform absorbs 1.0 **kilojoules** of heat, and the specific heat of chloroform is $0.96 \text{ J/g}^{\circ}\text{C}$?
2. How much energy is required to heat 120.0 g of water from 2.0°C to 24.0°C ? (C_p of $\text{H}_2\text{O} = 4.184 \text{ J/g } ^{\circ}\text{K}$)
3. When a 220 g sample of aluminum (Al) absorbs 9612 J of energy, its temperature increases from 25°C to 115°C .
Find the specific heat of aluminum.