

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 **joules** of heat, and the specific heat of chloroform is 0.96 J/g°K?
2. How much energy is required to heat 120.0 g of water from 2.0 °C to 24.0 °C? (Cp of H₂O = 4.184 J/g °C)
3. When a 120 g sample of aluminum (Al) absorbs 9612 kJ of energy, its temperature increases from 25°C to 115°C.
Find the specific heat of aluminum.