THERMOQUIZ

Energy for heating water

How much energy is required to increase the temperature of 2 liters water from 20 degree Celsius to 100 degrees Celsius?

Answer: 672 kJ

$$\mathrm{Q} = \mathrm{m} * \mathrm{c_p} * \Delta\mathrm{T} = \rho * \mathrm{V} * \mathrm{c_p} * \Delta\mathrm{T} = \ 2 * 10^{-3} * 4.2 * 80 * 10^3 \frac{\mathrm{m^3 * kJ * K}}{\mathrm{kg * K}} * \frac{\mathrm{kg}}{\mathrm{m^3}} = 672\mathrm{kJ}$$