

Answer on Question #85873 – Chemistry – Inorganic Chemistry

If a system has 3.00×10^2 kcal of work done to it, and releases 5.00×10^2 kJ of heat into its surroundings, what is the change in internal energy of the system?

Solution:

$$3.00 \times 10^2 \text{ kcal} \times 4.19 \text{ kJ/kcal} = 1.26 \times 10^3 \text{ kJ}$$

$$\text{Change in internal energy} = 1.26 \times 10^3 \text{ kJ} - 5.00 \times 10^2 \text{ kJ} = +7.57 \times 10^2 \text{ kJ}$$

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