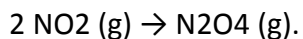


What is the  $\Delta H^\circ$  for the following reaction (in kJ/mol of reaction exactly as written)?



To solve, use Appendix II in your textbook (containing standard heats of formation).

Solution:

$$1. \quad aA \rightarrow bB$$

$$\Delta H^\circ = a \times \Delta H^\circ(A) - b \times \Delta H^\circ(B)$$

$$2. \Delta H^\circ(\text{NO}_2) = 39 \text{ kJ/mol};$$

$$\Delta H^\circ(\text{N}_2\text{O}_4) = 10 \text{ kJ/mol}.$$

$$3. \Delta H^\circ = 2 \times 39 \text{ kJ/mol} - 1 \times 10 \text{ kJ/mol} = 68 \text{ kJ/mol}.$$

Answer:  $\Delta H^\circ = 68 \text{ kJ/mol}$ .

Answer provided by [www.AssignmentExpert.com](http://www.AssignmentExpert.com)