

Answer on Question #53160 – Chemistry – General Chemistry

Task:

- 1) Find ΔH_f^0 for $\text{NO}_2(\text{g})$ from Appendix IIB in the textbook.
- 2) Find ΔH_f^0 for $\text{MgCO}_3(\text{s})$ from Appendix IIB in the textbook.
- 3) Find ΔH_f^0 for $\text{C}_2\text{H}_4(\text{g})$ from Appendix IIB in the textbook.
- 4) Find ΔH_f^0 for $\text{CH}_3\text{OH}(\text{l})$ from Appendix IIB in the textbook.

Answer:

Each molecule has its ΔH_f^0 – a standard enthalpy of formation. It is a table value that you can find in your book (Appendix IIB). Here are the values for these compounds:

$$\Delta H_f^0 \text{ for } \text{NO}_2(\text{g}) = 34 \text{ kJ/mol}$$

$$\Delta H_f^0 \text{ for } \text{MgCO}_3(\text{s}) = -1095.85 \text{ kJ/mol}$$

$$\Delta H_f^0 \text{ for } \text{C}_2\text{H}_4(\text{g}) = 52 \text{ kJ/mol}$$

$$\Delta H_f^0 \text{ for } \text{CH}_3\text{OH}(\text{l}) = -238.6 \text{ kJ/mol}$$