

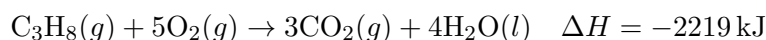
# Thermochemical Equations

SCC283

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## 1. Heat of Combustion for Propane:

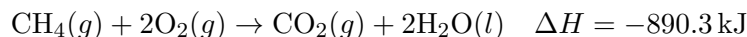
The combustion of propane,  $\text{C}_3\text{H}_8$ , is represented by the following thermochemical equation:



- How much heat is released when 2.50 moles of propane are combusted?
- What is the heat released when 100.0 g of propane are burned?

## 2. Heat of Combustion for Methane:

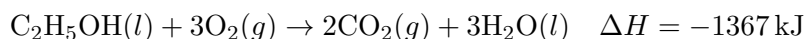
The combustion of methane,  $\text{CH}_4$ , is represented by the following thermochemical equation:



- How much heat is released when 3.00 moles of methane are combusted?
- What is the heat released when 48.0 g of methane are burned?

## 3. Heat of Combustion for Ethanol:

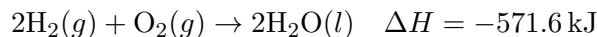
The combustion of ethanol,  $\text{C}_2\text{H}_5\text{OH}$ , is represented by the following thermochemical equation:



- How much heat is released when 0.750 moles of ethanol are combusted?
- What is the heat released when 46.0 g of ethanol are burned?

## 4. Heat of Combustion for Hydrogen:

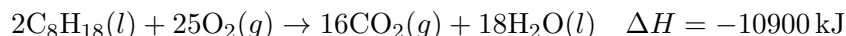
The combustion of hydrogen,  $\text{H}_2$ , is represented by the following thermochemical equation:



- How much heat is released when 5.00 moles of hydrogen are combusted?
- What is the heat released when 10.0 g of hydrogen are burned?

## 5. Heat of Combustion for Octane:

The combustion of octane,  $\text{C}_8\text{H}_{18}$ , is represented by the following thermochemical equation:



- How much heat is released when 0.400 moles of octane are combusted?
- What is the heat released when 114 g of octane are burned?