Answer on Question #78553 - Chemistry - Physical Chemistry

Question:

8. The formation enthalpy of palmitic acid C16H32O2 is -848.4 kJ/mole. What is the enthalpy of its combustion?

Solution:

The molar heat of combustion of palmitic acid is a positive value, 848.4 kJ/mole.

The enthalpy change for the formation of palmitic acid is a negative value, ΔH = -848.4 kJ/mole, because the reaction produces energy (it is an exothermic reaction).

$\Delta H_c = -\Delta H_f = 848.4$ kJ/mol.

Answer: 848.4 kJ/mol.