Question #59672, Chemistry, General Chemistry

Write an equation including state symbols, for the standard enthalpy of formation of?

$CH_3OH_{(l)}$ and $AlCl_{3(s)}$ and $CuSO_4 \cdot 5H_2O_{(s)}$

In detail please.

Answer:

$CO_{2(g)} + 2H_2O_{(l)} \rightarrow CH_3OH_{(l)} + (3/2)O_{2(g)}$; $\Delta H = +726.4$ kJ/mol

$2\ Al_{(s)} + 3\ Cl_{2(g)} - \rightarrow 2\ AlCl_{3(s)}$; $\Delta H = -705.63$ kJ/mol

$Cu_{(s)} + S_{(s)} + 5H_2O_{(g)} + 2O_{2(g)} \rightarrow CuSO_4 \cdot 5H_2O_{(S)}$; $\Delta H = -11.7$ kJ/mol