Answer on Question #56952 - Chemistry - Other

Question:
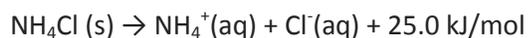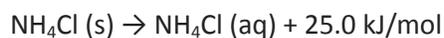
Write thermochemical equations, two ways, for each of the following situations.
a) When 1 mole of NH4Cl is dissolved in water, 25.0 kJ is lost by the water
b) When acetic acid is neutralized by sodium hydroxide, 76 kJ (per mole of acetic acid) of heat is released

Answer:

a)

NH_4Cl (s) → NH_4Cl (aq) + 25.0 kJ/mol

NH_4Cl (s) → NH_4^+(aq) + Cl^-(aq) + 25.0 kJ/mol

b)

CH_3COOH(aq) + NaOH(aq) → $NaCH_3COO$(aq) + H_2O(l) − 76 kJ/mol

CH_3COOH(aq) +Na^+(aq) + OH^-(aq) → Na^+(aq) + CH_3COO^-(aq) + H_2O − 76 kJ/mol