Calculate the equilibrium constant at 298 K for the following reaction:

$2Fe^{3+} + 3S^{2-} \rightleftharpoons Fe_2S_3$

Ans = 1.04×10^{39}

Calculate the equilibrium constant at 298 K for the following reaction:

$CuS \rightleftharpoons Cu^{2+} + S^{2-}$

Ans = 3.1×10^{-26}

Calculate the equilibrium constant at 298 K for the following reaction:

$N_2\,(g) + 3H_2\,(g) \rightleftharpoons 2NH_3\,(g)$

Ans = 6.1×10^{5}

Calculate the equilibrium constant at 298 K for the following reaction:

$2CO(g) + O_2\,(g) \rightleftharpoons 2CO_2\,(g)$

Ans = 1.5×10^{90}

Calculate the equilibrium constant at 298 K for the following reaction:

$2SO_2 + O_2 \rightleftharpoons 2SO_3$

Ans = 6.94×10^{24}

Calculate the equilibrium constant at 298 K for the following reaction:

$HCl\,(g) \rightleftharpoons H^+ + Cl^-$

Ans = 2.1×10^{6}

Calculate the equilibrium constant at 298 K for the following reaction:

$CO_2\,(g) + H_2O\,(l) \rightleftharpoons H_2CO_3(aq)$

Ans = 3.52×10^{-2}

Calculate the equilibrium constant at 298 K for the following reaction:

$CH_3COOH\ (aq) \rightleftharpoons CH_3COO^- + H^+$

Ans = 1.74×10^{-5}

Calculate the equilibrium constant at 298 K for the following reaction:

$H_2S(g) \rightleftharpoons 2H^+ + S^{2-}$

Ans = 1.2×10^{-21}

Calculate the equilibrium constant at 298 K for the following reaction:

$H_2S(aq) \rightleftharpoons 2H^+ + S^{2-}$

Ans = 1.4×10^{-20}

Calculate the equilibrium constant at 298 K for the following reaction:

$NH_3\ (g) + H_2O(l) \rightleftharpoons NH_4^+ + OH^-$

Ans = 1.06×10^{-3}

Calculate the equilibrium constant at 298 K for the following reaction:

$NH_3\ (aq) + H_2O(l) \rightleftharpoons NH_4^+ + OH^-$

Ans = 1.84×10^{-5}

Calculate the equilibrium constant at 298 K for the following reaction:

$CaO(s) + CO_2(g) \rightleftharpoons CaCO_3(s)$

Ans = 7.4×10^{22}

Calculate the equilibrium constant at 298 K for the following reaction:

$PCl_3 + CL_2 \rightleftharpoons PCl_5$

Ans = 3.4×10^{6}

Calculate the equilibrium constant at 298 K for the following reaction:

SiO_2 (s) + 4HF (g) ⇌ SiF_4 (g) + $2H_2O$(g)

Ans = 1.19×10^{14}

Calculate the equilibrium constant at 298 K for the following reaction:

Zn (s) + SO_2 (g) ⇌ ZnS (s) + 2ZnO (s)

Ans = 4.2×10^{98}

Calculate the equilibrium constant at 298 K for the following reaction:

N_2O(g) + O_2(g) ⇌ N_2O_3(g)

Ans = 4.4×10^{-8}