Answers to Practice Problems page 504

Homework — GENERAL

Additional Practice Calculate K_{eq} for the following reactions from the given data.

a. $COCl_2(g) \rightleftarrows CO(g) + Cl_2(g)$
At equilibrium $[CO] = [Cl_2] = 0.0178$, $[COCl_2] = 0.00740$
Ans. $K_{eq} = 0.043$

b. $Br_2 \rightleftarrows 2Br(g)$
At equilibrium $[Br_2] = 0.99$, $[Br] = 0.020$ Ans. $K_{eq} = 4.0 \times 10^{-4}$

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Answers to Practice Problems A

1. $K_{eq} = \dfrac{[N_2O_4]}{[NO_2]^2} = \dfrac{(4.0 \times 10^{-2})}{(1.4 \times 10^{-1})^2} =$

2.0

2. $K_{eq} = \dfrac{[SO_3]^2}{([SO_2]^2[O_2])} =$

$$\frac{(1.01 \times 10^{-2})^2}{(3.61 \times 10^{-3})^2(6.11 \times 10^{-4})} =$$

1.28×10^4