

1.10.3.2: Practice Equilibrium Constant Expressions

Exercise 1.10.3.2.1

Which of the following is true at equilibrium conditions? (Choose all that apply.)

- a. The forward reaction rate is zero.
- b. The amount of reactants left is zero.
- c. The forward reaction rate is equal to the reverse reaction rate.
- d. The amount of products is equal to the amount of reactants.
- e. The amount of products that is present is constant.
- f. The product stops forming.

Answer

c, e.

Exercise 1.10.3.2.1

What does it mean if a reversible reaction has an equilibrium constant (K_{eq}) with a very small value?

- a. The reaction rate is very slow.
- b. There are more reactants than products at equilibrium.
- c. There are more products than reactants at equilibrium.
- d. The forward reaction is slower than the reverse reaction.

Answer

b

Exercise 1.10.3.2.1

Which of the following would be defined as having a value of 1 in an equilibrium constant expression? (Choose all that apply.)

- a. a solid
- b. a gas
- c. a liquid
- d. a solute dissolved in a solution

Answer

a and c.

Exercise 1.10.3.2.1



What is the equilibrium constant expression of the reaction above?

Answer

$$K_{eq} = \frac{[SO_3]^2}{[SO_2]^2[O_2]}$$

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