

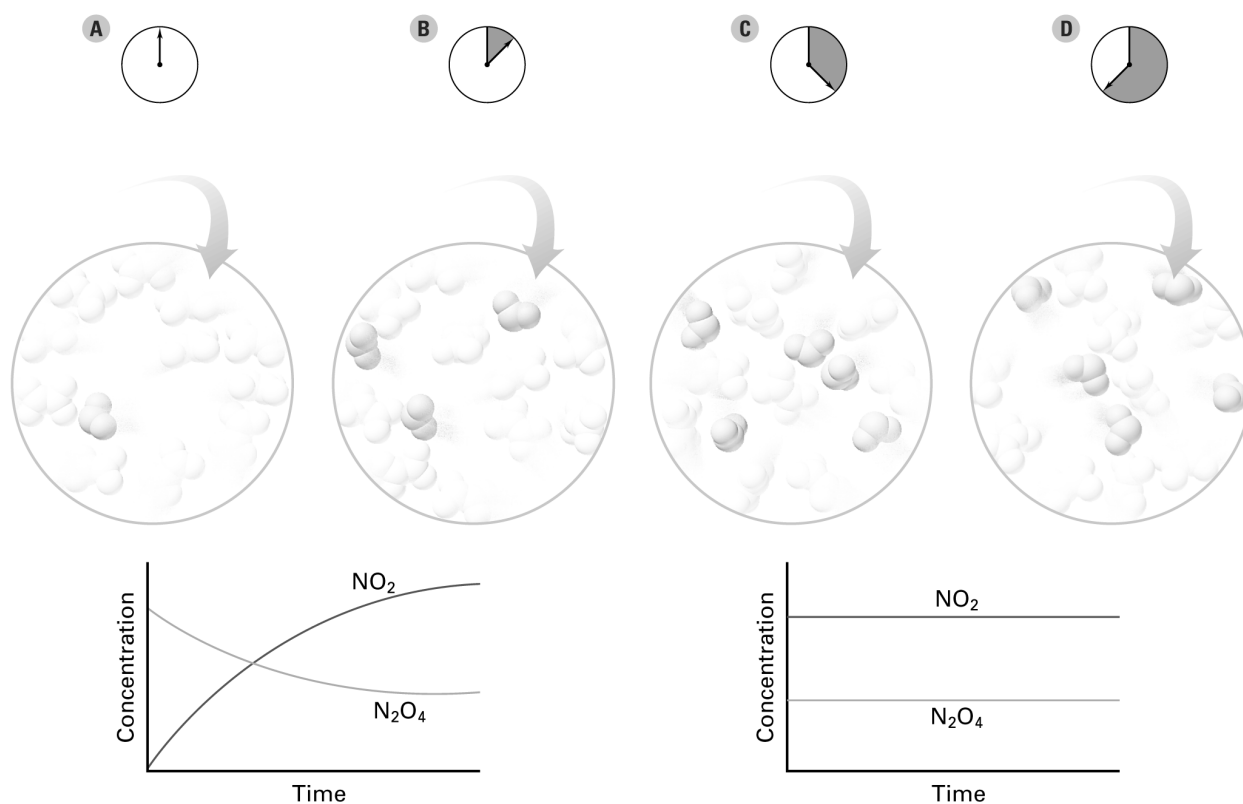
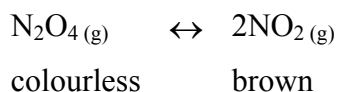
Overhead Master

Chapter 7

BLM 7-1

Illustrating a Chemical System in Equilibrium

As a system, such as the one below, approaches equilibrium, the rate of the forward reaction decreases and the rate of the reverse reaction increases. At equilibrium, the macroscopic (observable) properties of the system are constant. Changes at the molecular level continue, and take place at equal rates.



Characteristics of a System in Equilibrium

- Observable (macroscopic) properties are constant.
- Equilibrium can only be reached in a closed system.
- A system in equilibrium will remain in equilibrium as long as the system remains closed.
- Equilibrium can be approached from either the forward or reverse direction.