

Participation Assignment

CHEM 1100-General Chemistry II

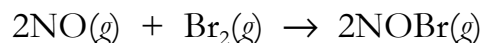
Name:

#7

Section: 31, TR

Due Date: Thursday 4/19/2018

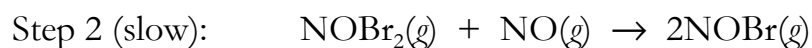
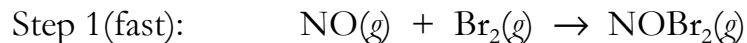
1. The overall reaction between nitrogen monoxide and bromine may be written as follows:



The observed rate law is:

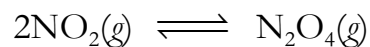
$$\text{rate} = k[\text{NO}]^2[\text{Br}_2]$$

The following is a proposed mechanism:



a. Add up both of the elementary steps and show that this equals the overall chemical equation.

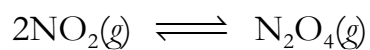
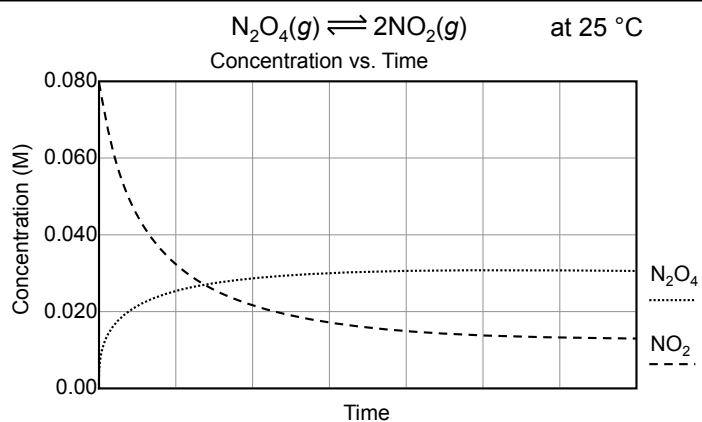
b. Write the rate law based on the slow step. Is this the same as the experimental rate law?



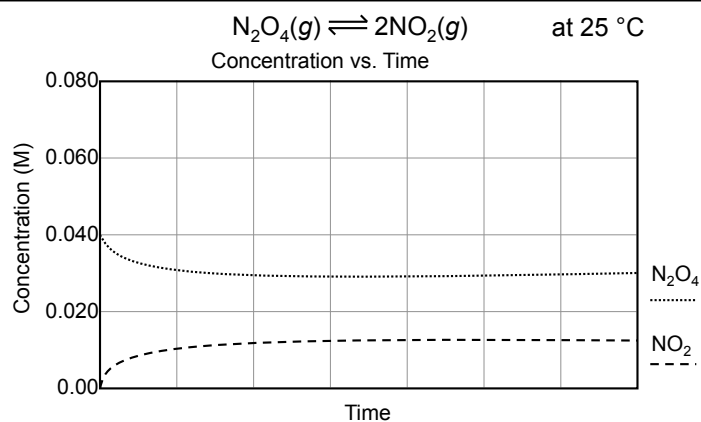
Trial	$[\text{NO}_2]_i$	$[\text{N}_2\text{O}_4]_i$	$[\text{NO}_2]_{eq}$	$[\text{N}_2\text{O}_4]_{eq}$	(at 25 °C)
1	0.0800	0			
2	0	0.0400			
3	0.0600	0			
4	0	0.0600			
5	0.0600	0.0200			

Chemical Equilibrium:

Chemical Equilibrium Introduction



Chemical Equilibrium Introduction



2. Write the equilibrium equations for each of the following reactions:

