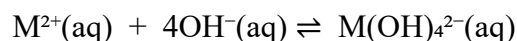


EXPERIMENT 6 PRELAB ASSIGNMENT:

Use the virtual lab (link on D2L) to apply the following stresses to an equilibrium system and explain your observations using Le Chatelier's principle. Each explanation should

- 1) state the specific stress/disturbance to equilibrium,
 - 2) state the Le Chatelier response to the stress (shift left / right), and
 - 3) use the Le Chatelier response to explain the experimental observations.
1. Consider the reaction below at equilibrium. The initial solution is a medium blue.



NOTE: M^{2+} is light blue and $\text{M}(\text{OH})_4^{2-}$ is a dark blue.

- a) 5 mL of 3 M NaOH is added. Observation: _____
Explanation:
- b) 3 mL of 3 M sulfuric acid (H_2SO_4) is added. Observation: _____
Explanation:
- c) Starting from the initial equilibrium mixture, decrease the temperature to 0 °C (keep another flask containing the initial mixture at 25 °C for comparison.
Observation: _____
Explanation: Make sure to note whether the reaction is endothermic or exothermic.