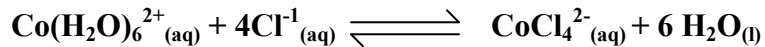


**LECHÂTELIER'S PRINCIPLE**

Name: \_\_\_\_\_

The chemical reaction:



is an equilibrium process which is an endothermic process. Predict how the reaction will be affected by:

(a) Increases pressure from 1.0atm to 5.0atm.

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(b) The addition of 10.0g NaCl to the solution

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(c) The addition of AgNO<sub>3</sub> to the solution

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(d) Placing the reaction into an ice bath

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(e) Removal of water from the reaction through evaporation

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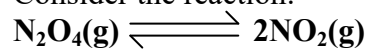
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(f) Heating the reaction in a hot water bath

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2. Consider the reaction:



$$\Delta H^\circ = +58.0\text{kJ}$$

in which direction will the equilibrium shift when:

(a)  $\text{N}_2\text{O}_4$  is added

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(b)  $\text{NO}_2$  is removed

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(c) the total pressure is increased by addition of  $\text{N}_2(\text{g})$

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(d) the volume is increased

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(e) The temperature is decreased

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