**Le Chatelier’s Principle**

Le Chatelier’s Principle states that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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How can you stress a system?

48.4 kJ + H2 (g) + I2 (g) ↔ 2HI (g)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Stress | Equilibrium Shift | [H2] | [I2] | [HI] | K |
| Add H2 |  |  |  |  |  |
| Add I2 |  |  |  |  |  |
| Add HI |  |  |  |  |  |
| Remove H2 |  |  |  |  |  |
| Remove I2 |  |  |  |  |  |
| Remove HI |  |  |  |  |  |
| Increase Temperature |  |  |  |  |  |
| Decrease Temperature |  |  |  |  |  |
| Increase  Pressure |  |  |  |  |  |
| Decrease Pressure |  |  |  |  |  |

The value of the equilibrium constant is not affected by any stress except \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

SO2(g) + Cl2(g) ↔ SO2Cl2(g) △H = -22kJ

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Stress | Equilibrium Shift | [SO2Cl2] | [SO2] | [Cl2] | K |
| Add SO2Cl2 |  |  |  |  |  |
| Add SO2 |  |  |  |  |  |
| Increase Temperature |  |  |  |  |  |
| Decrease Pressure |  |  |  |  |  |

Mg(OH)2(s) ↔ Mg2+(aq) + 2OH-(aq) ∆H = -22kJ

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Stress** | **Equilibrium Shift** | **[Mg(OH)2]** | **[Mg2+]** | **[OH-]** | **Value of K** |
| Add NaOH |  |  |  |  |  |
| Add solid Mg(OH)2 |  |  |  |  |  |
| Decrease Temperature |  |  |  |  |  |
| Add HCl |  |  |  |  |  |