







LeChatelier's Principle: Summary

A change in any of the factors that determine the equilibrium conditions of a system will cause the system to change in such a manner as to reduce or counteract the effect of the change.

Factors	Change	Consider	Direction to reach Equilibrium	
1. Concentration	↑ Reactant ↑ Product		Forward  Reverse 	
2. Temperature	↑ T	$\Delta H > 0$ $\Delta H < 0$	Forward  Reverse 	K increases K decreases
3. Volume	↑ V (P decreases)	$\Delta n_{\text{gas}} > 0$ $\Delta n_{\text{gas}} < 0$ $\Delta n_{\text{gas}} = 0$	Forward  Reverse  No effect	

If you reverse any of the **Changes** above, the **Direction to reach Equilibrium** reverses.