

Le-Chatelier Principle Cheat Sheet

by Tazz (Tonoya) via cheatography.com/162324/cs/44936/

Le-Chatelier Principle

At the equilibrium of reversible reaction, if any of the factors (temperature, pressure and concentration) is changed, the position of the equilibrium will shift in such a direction that the effect of change of factors is relieved.

Effect of temperature (exothermic reaction)				
A+B>C+D+Energy				
Or, A+B>C+D; ∇H=-ve				
Temperature increase	Temperature decrese			
Rate of forward reaction <rate backward="" of="" reaction<="" td=""><td>Rate of forward reaction>Rate of backward reaction</td></rate>	Rate of forward reaction>Rate of backward reaction			
Equilibrium shift left ward	Equilibrium shift right ward			
Product concentration decrease	Product concentration increase			

Effect of pressure	
N ₂ +3H ₂ >2NH ₃	
Total mol more on left side	
Pressure increase	Pressure decrease
Rate of forward reaction>Rate of backward reaction	Rate of forward reaction <rate backward="" of="" reaction<="" td=""></rate>
Equilibrium shift right ward	Equilibrium shift left ward
Product concentration increase	Product concentration decrease

Effect of pressure	
PCI ₅ >PCI ₃ +CI ₂	
Total mol more on right side	
Pressure increase	Pressure decrese
Rate of forward reaction <rate backward="" of="" reaction<="" td=""><td>Rate of forward reaction>Rate of backward reaction</td></rate>	Rate of forward reaction>Rate of backward reaction
Equilibrium shift left ward	Equilibrium shift right ward
Product concentration decrease	Product concentration increase

Effect of pressure	
H ₂ +I ₂ >2HI	
Total mol equal on both side	
Pressure increase	Pressure decrease
No effect	No effect

Effect of pressure

Only applicable for gasses as pressure doesn't affect solid or liquid.

Effect of concentration	
Reactant>product	
Concentration increase	Concentration decrease
Rate of forward reaction>Rate of	Rate of forward reaction <rate of<="" td=""></rate>
backward reaction	backward reaction
Equilibrium shift right ward	Equilibrium shift left ward
Product concentration increase	Product concentration decrease

Effect of temperature (endothermic reaction)				
A+B>C+D-Energy				
Or, A+B>C+D; ∇H=+ve				
Temperature increase	Temperature decrese			
Rate of forward reaction>Rate of backward reaction	Rate of forward reaction <rate backward="" of="" reaction<="" td=""></rate>			
Equilibrium shift right ward	Equilibrium shift left ward			
Product concentration increase	Product concentration decrease			



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