

9. THE COMMON ION EFFECT

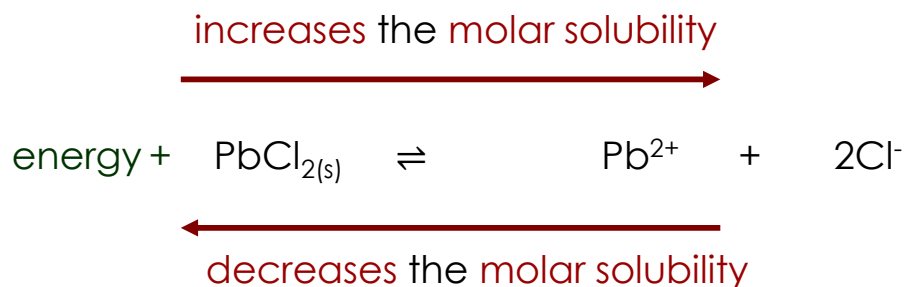
UNIT 3 – CHEMICAL EQUILIBRIUM

CH40S MR. WIEBE

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SOLUBILITY & LECHATelier

The **molar solubility** is the amount of solute in **moles per litre** that dissolves into **ions** to form a **saturated solution**.



Solid **equilibria** are **endothermic**.

Only changing the **temperature** changes the **K_{sp}**.

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EXAMPLE 1



<u>Substance Added</u>	<u>Eq'm Shift</u>	<u>Effect on Solubility</u>
KOH		
NaCl		
HCl		
Increase Temp		

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EXAMPLE 2

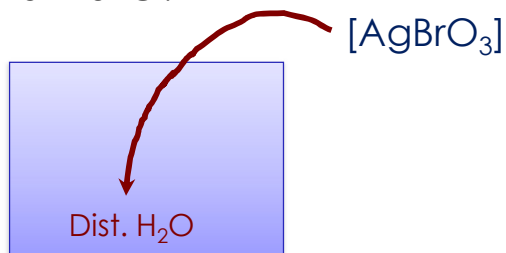


<u>Substance Added</u>	<u>Eq'm Shift</u>	<u>Effect on Solubility</u>
AgNO ₃		
NaCl		
Pb(NO ₃) ₂		
Decrease Temp		

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PUTTING IT ALL TOGETHER...

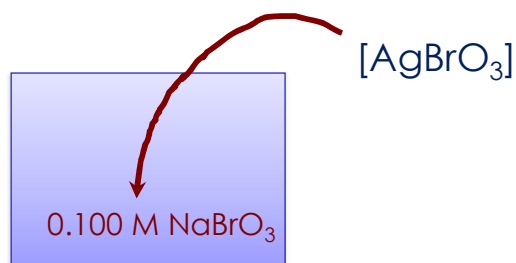
What is the solubility of silver bromate (AgBrO_3) in distilled water at 25°C ?



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PUTTING IT ALL TOGETHER...

What is the solubility of silver bromate (AgBrO_3) in a solution of 0.100M NaBrO_3 at 25°C ?



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