

6 Strong Acids		6 Strong Bases	
HClO ₄	perchloric acid	LiOH	lithium hydroxide
HCl	hydrochloric acid	NaOH	sodium hydroxide
HBr	hydrobromic acid	KOH	potassium hydroxide
HI	hydroiodic acid	Ca(OH) ₂	calcium hydroxide
HNO ₃	nitric acid	Sr(OH) ₂	strontium hydroxide
H ₂ SO ₄	sulfuric acid	Ba(OH) ₂	barium hydroxide

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Sulfur oxide (IV) SO₂

Sulfur oxide (VI) SO₃

CO₂ carbon oxide (IV)

CO carbon oxide (II)



Acidity and pH scale

pH	Examples of solutions
0	Battery acid, strong hydrofluoric acid
1	Hydrochloric acid secreted by stomach lining
2	Lemon juice, gastric acid, vinegar
3	Grapefruit juice, orange juice, soda
4	Tomato juice, acid rain
5	Soft drinking water, black coffee
6	Urine, saliva
7	"Pure" water
8	Sea water
9	Baking soda
10	Great Salt Lake, milk of magnesia
11	Ammonia solution
12	Soapy water
13	Bleach, oven cleaner
14	Liquid drain cleaner



<https://youtu.be/j26rvp-j5ds>

Dissociation of acids and bases

strong acid:



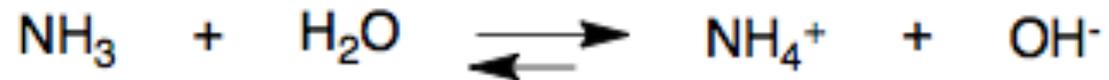
weak acid:



strong base:



weak base:





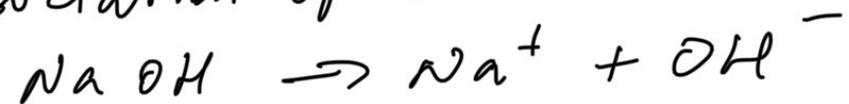
the proton is very "aggressive"



Acids throw off protons.

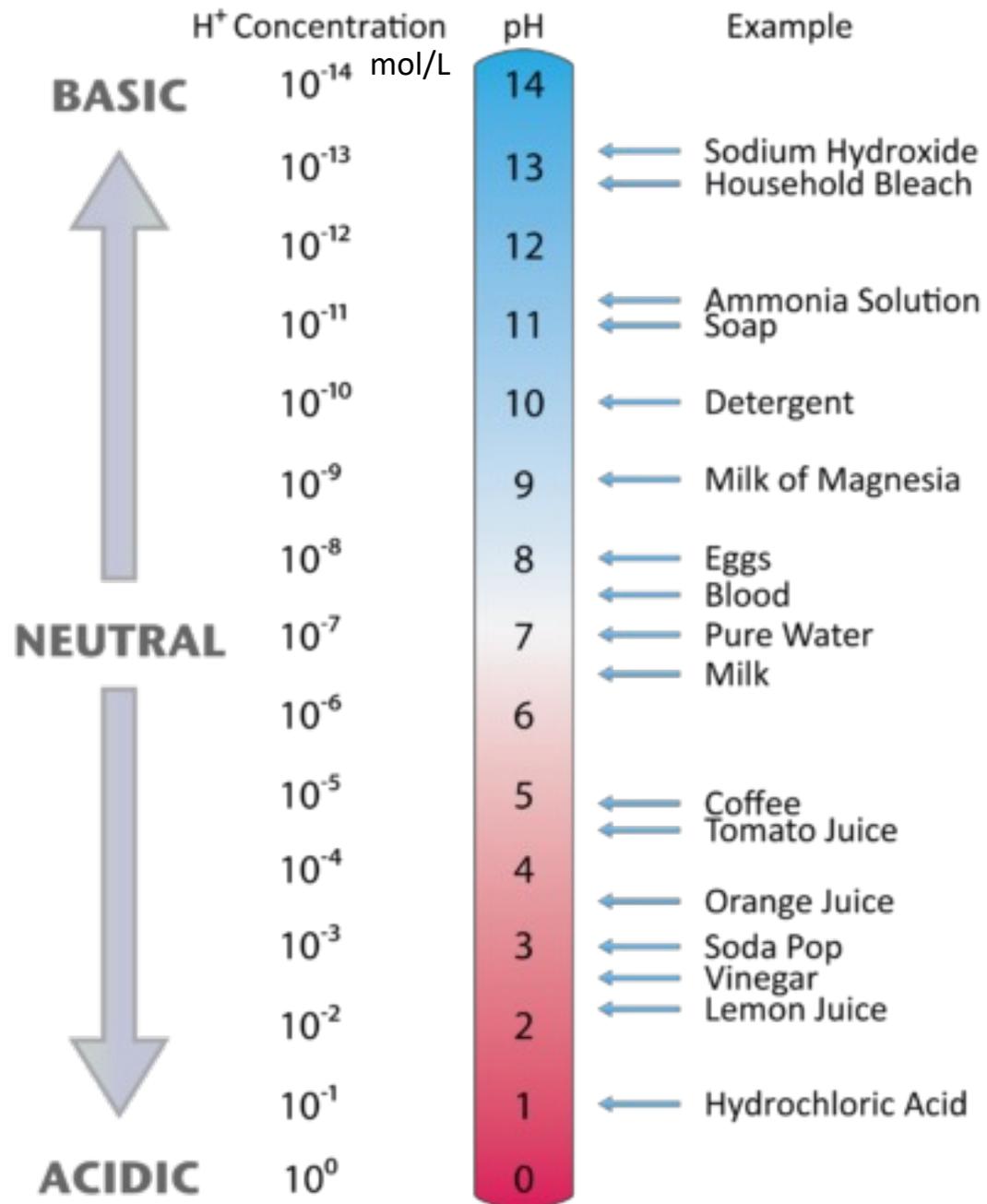
Bases take the proton.

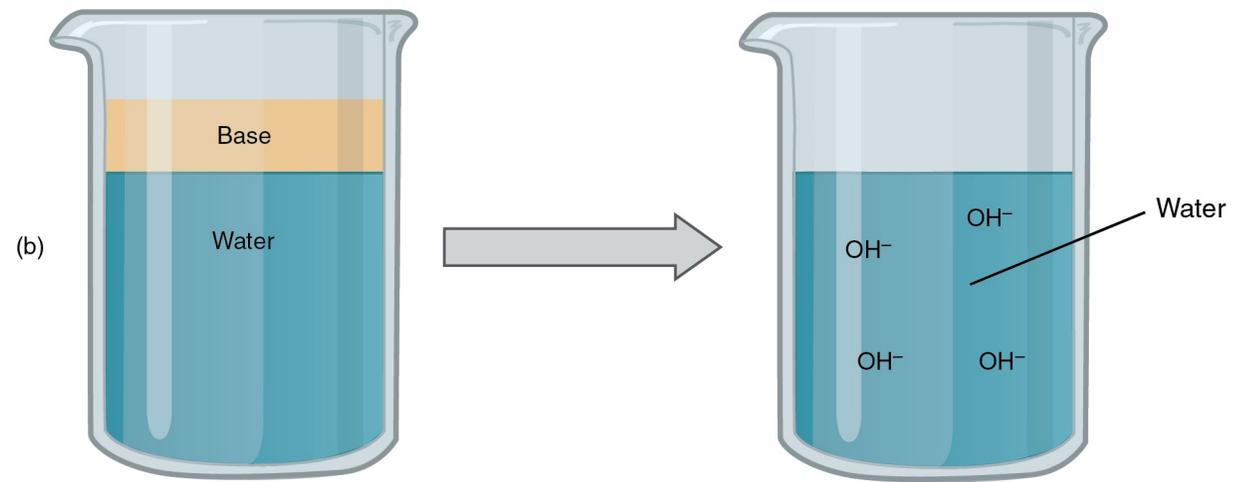
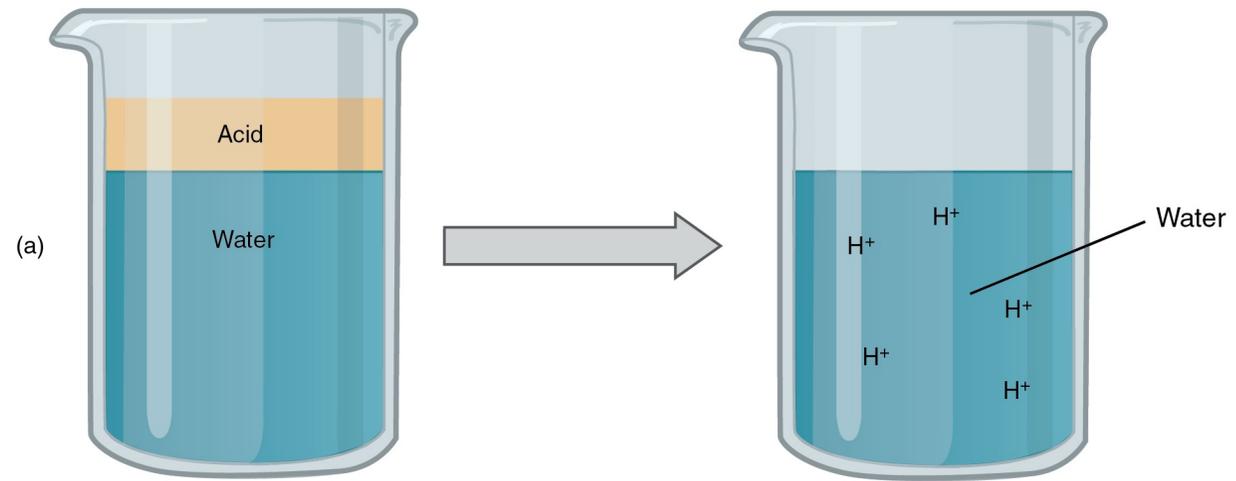
Dissociation of base



In the solution bases take the proton







Dissociation of water



In pure water the concentration of H^+ and OH^- is equal at 10^{-7} mol/L, pH 7.