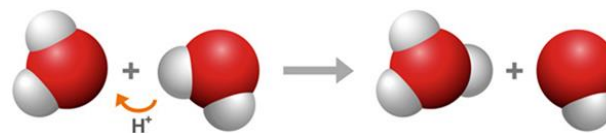


Acids, Bases, & Salts Notes

Sometimes molecules break down in _____, and release either an _____ ion or an _____ ion.

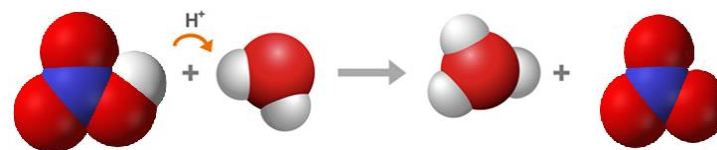


When a hydrogen ion is released, the solution becomes _____.

When a hydroxide ion is released, the solution becomes _____.

Example: vinegar (CH_3COOH) molecules placed in water will split into CH_3COO^- and H^+ . That hydrogen ion is the reason it is an _____.

Example: $\text{HNO}_3 + \text{H}_2\text{O} \rightarrow \text{H}_3\text{O}^+ + \text{NO}_3^-$

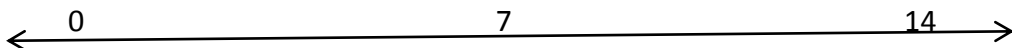


Acids & Bases in Solution

- $\text{HCl} + \text{H}_2\text{O} \rightarrow \text{H}_3\text{O}^+ + \text{Cl}^-$
- $\text{NaOH in water} \rightarrow \text{Na}^+ + \text{OH}^-$
- $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{HOH}$
- $\text{NH}_3 + \text{H}_2\text{O} \rightarrow \text{NH}_4^+ + \text{OH}^-$

Scientists use something called the **pH** scale to measure how _____ a liquid is. pH measures concentrations of

_____ and _____ on a scale from _____ to _____. Distilled water is _____ (right in the middle). Acids are found between _____. Bases are from _____.



Substance	pH	Acid or Base
Lemons		
Blood		
Laundry Detergent		
Soda		
Bleach		
Bread		
Urine		

Properties of Acids

- pH _____ than 7
- Tastes _____
- _____
- Forms _____ ions in solution
- Corrosive - reacts with _____ to form _____
- Good _____

Properties of Bases

- pH _____ than 7
- Taste _____
- _____
- Usually forms _____ ions in solution
- Corrosive - Dissolves _____ and _____.
- Feels _____

Common Acids & Bases

Acids		
HCl	hydrochloric	stomach acid
H ₂ SO ₄		
HNO ₃		
HC ₂ H ₃ O ₂		
H ₂ CO ₃		
H ₃ PO ₄		
Bases		
NaOH		
Mg (OH) ₂		
Al(OH) ₃		
NH ₄ OH		

What is a Salt?

- A salt is a _____ substance produced from the reaction of an _____.
- Composed of the _____ ion of an acid and the _____ ion of a base.
- One of the products of a _____
- Examples:

Neutralization Reactions

- A neutralization reaction is the reaction of an acid with a base to produce salt and water.
- Example :