Lab

Research question

Do all indicators work in the same way? Are indicators infinitely precise?

Introduction

An acid is a compound that contains hydrogen. It forms an acidic solution when it dissolves in water. A base is a compound that can “accept” a positive hydrogen ion. When a base dissolves in water it forms a basic solution with hydroxide ions. To measure the acidity and basicity of a solution we use the PH scale.

Conclusion

Not all the indicators work the same way. Some give more persie color than others. Some had one or even two color changes. The indicators were estimates, they were not exact.

Vocabulary

An **Acid** is a chemical that gives off hydrogen ions in water and forms salts by combining with certain metals.

A **base** is a substance that can accept hydrogen ions in water and can neutralize an acid.

An **indicator** is defined as substances whose solutions change color due to changes in pH.

PH is a quantitative measure of the acidity or basicity of aqueous or other liquid solutions.

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DATA/OBSERVATIONS FOR DISTINGUISHNG BETWEEN ACIDS & BASES

VIA VARIOUS INDICATORS

Substance	Litmus Paper (R or B)	PH Strip – Indicate Color & #	Golden Rod Paper (Y or N for color change)	Phenolphthalein (Y or N for color change)	Bogen Universal Indicator Indicate Color	Acid or Base
Vinegar	red	orange 3	N	N	cherry red	A
Bleach	Blue	yellow 5	Y	Y	yellow	A
Ammonia	Blue	green 9	Y	Y	forestgreen	B
Orange Juice	red	orange 4	N	N	bloodred	A
Lemon Juice	red	orange 2	N	N	dark red	A
MOM	Blue	blue 11	Y	Y	army green	B
coke	red	orange 4	N	N	rust red	A