

Revision for Topic 7E "Acids & Alkalis"

Exploring Science 7 Pages 56-65

7E Acids & Alkalis

Acid Changes
Blue Litmas to Red

Alkali Changes
Red Litmas to Blue

e.g. Cabbage Juice

Indicators

Litmas

Natural

Representative pH values

Substance	pH
Battery acid	0.5
Gastric acid	1.5 - 2.0
Lemon juice	2.4
Cola	2.5
Vinegar	2.9
Orange or apple juice	3.5
Beer	4.5
Acid Rain	<5.0
Coffee	5.0
Tea or healthy skin	5.5
Milk	6.5
Pure water	7.0
Healthy human saliva	6.5 - 7.4
Blood	7.34 - 7.45
Sea water	8.0
Hand soap	9.0 - 10.0
Household ammonia	11.5
Bleach	12.5
Household lye	13.5

Courtesy of Wikipedia

Universal

Indicates how acid or alkaline something is:

pH 1-2 : Strong Acid
pH 4-6 : Weak Acid
pH 7 : Neutral
pH 8-10 : Weak Alkali
pH 11-14 : Strong Alkali

Change Colour

or Use pH Meter

pH Numbers

Acids & Alkalis Cancel Out

Neutralisation Reactions

Acid + Alkali -> A salt + Water

Evaporate to Get the Salt Crystals

Insect Stings are Often Acid or Alkali. Use the weak opposite to treat



Soap

Everyday Examples

Toothpaste

Washing Powder

Can be More Dangerous than Acids

Weak

Alkalis

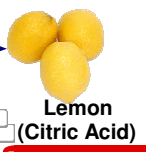
Strong e.g. Sodium Hydroxide

Sharp or Sour Taste

Acids

Strong Acids e.g. Hydrochloric, Sulphuric or Nitric

Everyday Examples



Lemon (Citric Acid)

Found in Fruit & Veg Such as Oranges, Peas & Cabbage



Vinegar



Fruit Juice



Fizzy Drinks



Weak Acids

Neither Acid or Alkali

Neutral

Everyday Examples

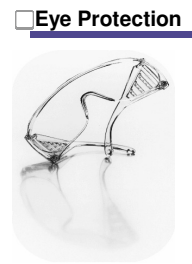
Pure Distilled Water



Acids & Alkalis, More Dangerous when Concentrated, less when Diluted

Safety

Wash Off With Water if split



Eye Protection

Corrosive

Symbols

Danger



Harmful or Irritant



Flammable



Toxic



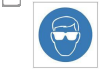
Corrosive



Risk of Electrocutation



Wear Eye Protection



Wash your Hands



Warning signs on lorries tell the emergency services how to deal with a spillage after an accident