

Strong vs Weak

-we ingest acids every day

- Citrus fruit – citric acid and ascorbic acid
- Soft drinks – phosphoric acid + carbonic acid
- Vinegar – acetic acid

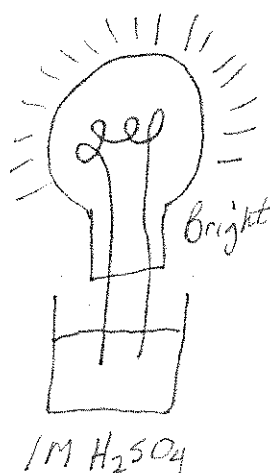
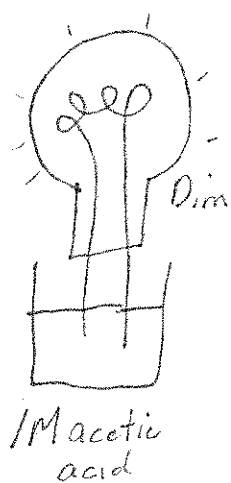
Would never ingest sulphuric acid

BUT vinegar and battery acid are both 1 M so they have the same concentration –obviously are not the same strengths.

Strength \neq concentration

Conductivity tests

- Substances that break into ions conduct electricity
- Covalent cmpds that do not break into ions do not conduct.
- If we test 1M acetic acid, the bulb glows very dimly
- If we test 1M H_2SO_4 , the bulb glows brightly.
- Even when we dilute the 1M H_2SO_4 it still glows more brightly than the acetic acid.

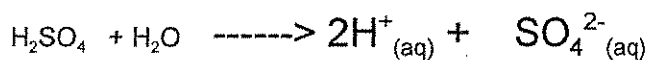


WHY?

When acetic acid is put in water, only a small amount of the acid actually dissociates (breaks down) into its' ions. Since acid strength is based on the amount of H^+ it produces, if only a small amount is produced, the acid is weak.



Sulphuric acid, on the other hand, almost completely dissociates into its' ions so it produces a lot more H^+ ions. This will conduct electricity better and will act as a stronger acid.



Bases work the same way. The more it breaks down into its OH^- ions, the stronger it will be.

