

How to Identify Acids, Bases and Salts

THE SCIENCES TUTOR LLC

INSTEAD OF GIVING YOU A LONG LIST OF ACIDS AND BASES THAT MOST TUTORS GIVE, I AM GOING TO TEACH YOU **HOW TO IDENTIFY ANYTHING AS AN ACID A BASE OR A SALT WITHOUT MEMORIZING ANYTHING**

SALTS

Any elements in the periodic table from Group 1 or 2, paired with any element in Group 7 (17) will be a SALT.

Any element from Group 1 or 2 (with the exception of H) in the Periodic Table paired with any polyatomic ion will be a salt.

All salt are STRONG electrolytes (which mean they conduct electricity) and all salts FULLY and COMPLETELY dissolve in water.

STRONG ACIDS

Hydrogen bonded to any Group 7 Element (EXCEPT Flourine) will give a strong acid.

ONE hydrogen with any polyatomic ion with be a strong acid.

H₂so₄ is the ONLY acid with 2 Hydrogens that is considered a strong base, otherwise any acid with more than one H is NOT considered a strong Acid.

ALL strong acids are considered strong electrolytes, will completely dissolve in water and will conduct electricity.

WEAK ACIDS

Any acid with 2 or more Hydrogens bonded to a polyatomic ion will be a weak acid.

HF is a very weak acid.

Any molecule with two or more Oxygens in a row followed by a Hydrogen will be considered a weak acid such as CH₃COOH. The more oxygens the more strong the acid will be.

Any molecule with only ONE oxygen followed by an H will not be any type of acid, it is an alcohol and not an acid at all.

NH₄⁺ is the only other non conventional weak acid.

All weak acids are weak electrolytes and will NOT completely dissolve in water but will conduct electricity weakly.

STRONG BASES

Any element from Group 1 or 2 in the periodic table of elements bonded to an OH- group will be a very strong base.

ALL strong bases are considered strong electrolytes and will completely dissolve in water and conduct electricity.

WEAK BASES

NH₃ is considered a weak base. All weak bases are considered weak electrolytes and will only partially dissolve in water and will weakly conduct electricity.

This information is copyrighted by The Sciences Tutor LLC and LEAH KINERET NARBONI the founder of The Sciences Tutor, 2025. Any unlawful selling, duplication, distribution or modification of copyrighted materials is prohibited. This material can only be used by the person who downloads it for studying purposed and cannot be redistributed.

For more information please see www.thesciencetutor.com