

CHAPTER OVERVIEW

8: Acids, Bases and pH

We have all heard of acids... *acid indigestion*, the acid content of *vinegars* and *cheap wines*, vats of *sulfuric acid* and arch villains. In the last chapter we learned about the molecular dipole in water and how water molecules form hydrogen bonds among themselves, and to other polar molecules. In this chapter we will see that this hydrogen bonding can be strong enough to actually break the O—H bonds in water and in other hydrogen bonded molecules, transferring the proton to water to form the hydronium ion, H_3O^+ . In its simplest sense, the formation of the hydronium ion is the “acidity” that we are all familiar with. We will see how we measure this acidity (the pH scale). We will get an introduction to the concept of equilibrium and you will finally come to appreciate the utility of the *log* and *anti-log* buttons on your scientific calculator!

[8.1: Hydrogen Bonding](#)

[8.2: Ionization of Acids in Solution](#)

[8.3: Conjugate Acid-Base Pairs](#)

[8.4: Acids-Bases Reactions: Neutralization](#)

[8.5: The Meaning of Neutrality - The Autoprotolysis of Water](#)

[8.6: pH Calculations](#)

[8.7: Titrations - Neutralization and Stoichiometry](#)

[8.S: Acids, Bases and pH \(Summary\)](#)

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