pH meter—A good pH meter will typically cost a few hundred dollars, but most of that cost is in the electrode. The meter electronics tend to be similar these days. You want to get a meter that has at least +/-0.05 pH accuracy, if not +/-0.02, and ATC. ATC keeps the probe in calibration when the temperature of the sample is several degrees off from the calibration temperature. Two-point calibration capability is preferred over single point. A good electrode can be either sealed or refillable and will have a resolution of +/-0.02 pH or smaller. A double junction electrode is less prone to contamination than a single junction electrode, which is important when working with sticky viscous solutions like wort and beer. Some electrode models have flushable junctions, which allows for easier cleaning and longer life.

pK—The negative logarithm of an equilibrium constant K. See Equilibrium Constant or Dissociation Constant.

ppb—parts per billion.

ppm—parts per million; equivalent to milligrams per liter for dilute solutions such as water and wort.

Residual Alkalinity—See Chapter 4.

Reduction—Reduction is the gain of electrons, or decrease in the oxidation state of a molecule, atom, or ion. The gain of electrons can also be considered as the loss of a proton, i.e., proton donation, such as an acid.

RO—Reverse osmosis.

SAC—Strong acid cation, i.e., ion-exchange resin type. See Chapter 8.

Salt—A salt is an ionic compound (i.e., held together by electrostatic charge difference) that can result from the neutralization reaction of an acid and a base. Calcium carbonate is a salt of carbonic acid and calcium hydroxide. Calcium sulfate is a salt of Sulfuric acid and calcium hydroxide. Table salt is the salt of hydrochloric acid and sodium hydroxide. The acid and base can be any type; these examples just happen to use hydroxide forms.