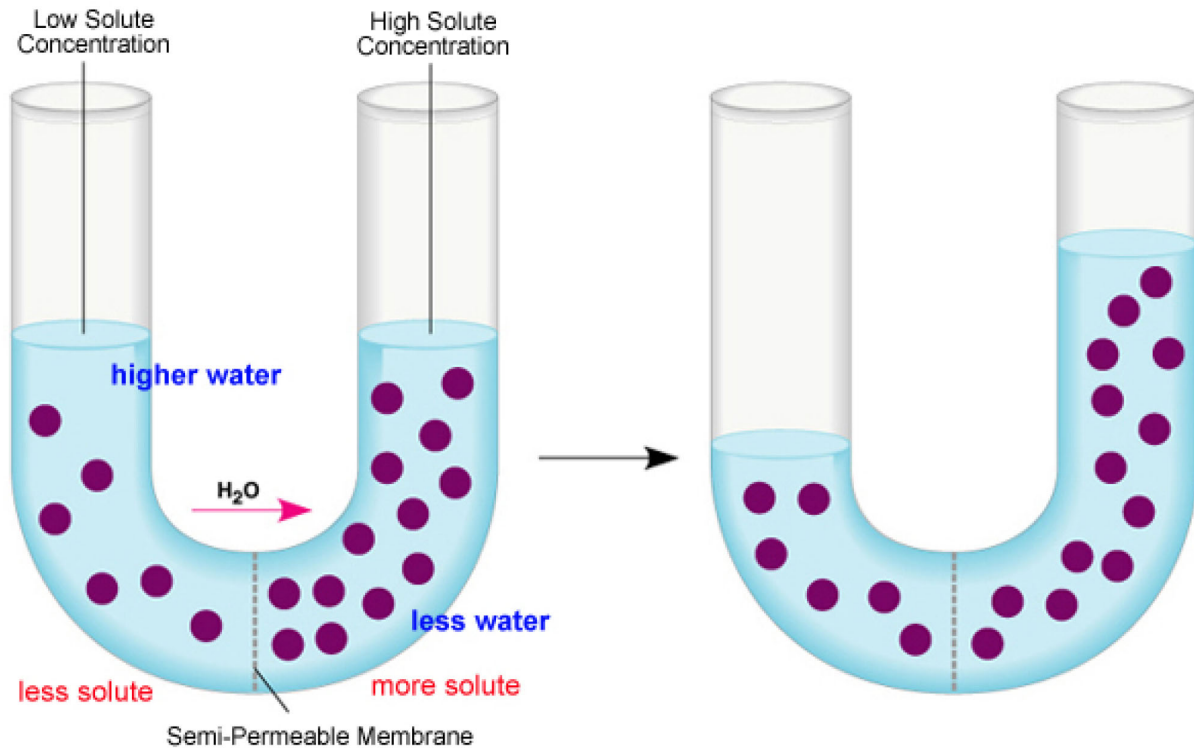


## Useful Water Constants

- Weight: 62.416 pounds per cubic foot at 32°F
- Weight: 8.33 pounds/gallon, 0.036 pounds/cubic inch
- Density: 1 gram per cubic centimeter (cc) at 39.2°F
- 1 gallon = 4 quarts = 8 pints = 128 ounces = 231 cubic inches
- 1 liter = 0.2642 gallons = 1.0568 quart = 61.02 cubic inches
- 1 Acre-Foot = 325,851 gallons = 43,560 cubic feet

## Osmosis Diagram



## Osmosis Explained

Osmosis is the passage of water from a region of low solute concentration through a semi-permeable membrane to a region of high solute concentration.

In the diagram above, two solutions have just been added to the U-shaped container the figure on the left. The solution on the right side of the tube is twice as concentrated as the solution on the left. Think of the solution on the left as 1/2 cup of sugar brought up to one quart volume on the left and 1 cup of sugar brought up to one quart volume with water on the right. The two sides are separated by a semipermeable membrane which allows the passage of water but not sugar. In time, the water migrates from the area of low solute concentration to the area of high solute concentration (the figure on the right). If gravity was not an issue, the water would migrate until the solution concentrations were equal on each side of the membrane (3/4 cup of sugar in 1 qt water).