Note: Section 5.2

Classifying Mixtures

There are four types of mixtures; mechanical, suspensions, emulsions, and solutions.

Mechanical Mixtures

You can easily see that they are heterogeneous mixtures because you can see the various parts in it that make up the whole thing. Most prepared foods are good examples of mechanical mixtures. Also things like concrete and asphalt are easy-to-identify mechanical mixtures. Usually these are solids.

Suspensions

These are heterogeneous mixtures where one part of it is suspended (floating in) another part of the mixture. The various parts of a suspension usually will separate out from each other pretty quickly. Salad dressings are suspensions. Milk is a suspension. Air pollution can be a suspension (soot, ash, smoke). If you look closely (maybe shine a light through it), you should see particles in it.

Emulsions

An emulsion is a mixture where the parts stay in suspension for a longer period of time. Paints are often emulsions. The chemical that keeps the parts suspended longer is called an emulsifying agent.

Solutions

A homogeneous mixture is where one part is ‘dissolved’ in another part of the mixture (both can be liquids). Every sample of it looks the same, even under a microscope. Examples include liquids like apple juice, solids like brass, stainless steel (solid solutions of metals are ‘alloys’), air (at the same altitude), and so on. When you shine a light through it, or look under a microscope, you can not see the parts in it.

A solution has two parts: the solute is the part that dissolves in the other part, called the solvent.

Common solvents include are water and acid. The two parts (solute and solvent) make up the solution.