

Distillation

Distillation is the process of boiling and then condensing water vapor to obtain high purity water. In principal this process is similar to the formation of rain in the natural water cycle and it is perhaps the one of the earliest forms of water treatment technologies known. In ancient time, the Greeks used distillation to convert seawater into drinking water.

In modern times, distillation is used produce high quality water for pharmaceutical and laboratory applications. Prior to distillation, water is usually pretreated by Reverse Osmosis or Ultrafiltration. This removes organic contaminants like oils, pesticides and alcohols that would otherwise vaporize with water because their boiling points are lower than water's. Most other contaminants and dissolved salts do not vaporize with water.

Despite the advantages of distillation, the process requires considerable amount of energy to vaporize water. This is an important consideration given the recent increase in energy prices lately. Distillation is not common for residential water purification, although commercial distillation units are available.



Distillation is used to convert seawater into drinking water on ships