

Research on ph level of water affecting rate of evaporation



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How does the ph level of water affect its rate of evaporation? Examples:

Almost not all in any normal range of pH values because changing pH has little effect on the total solids dissolved in the water. However, at very high or very low pH levels, say 12 you will see an effect from the change in boiling point (a rise). However, even this will depend on how the evaporation is being done. For a big pond or lake, higher dissolved solids (acid or base) will cause the rate of evaporation to go down. For example, evaporation in the Great Salt lake is only about 50% of the evaporation one would expect with pure water.

However, for an industrial evaporator, one can change the temperature of the heat source and the evaporation can be made to stay more or less constant. In addition, there are small effects from the change in how water bonds to itself, but mostly these are related to any other minerals dissolved in the water, and to get a pH other than about 7 there will need other minerals dissolved in the water like sulfate (sulfuric acid) or sodium (sodium hydroxide) -From Yahoo answers. Changing the pH of water could allow for greater or less solubility of minerals.

With more minerals in solution, the rate of evaporation increases while the boiling/freezing point lowers, as intermolecular attraction is decreased. The opposite would then be true with less minerals in solution. -From Yahoo answers . pH levels of liquids: isopropyl alcohol : pH level 5. 5 saturated lime water : 12. 4 Soft drinks: 3. 14 pH level (same as orange juice) Vinegar: 2. 4 Boiled water: pH level 8-10 Tap water : pH level 7 Corn flour: ? Detergent soap: 13 [The lower the pH level the more acidic the liquid is.