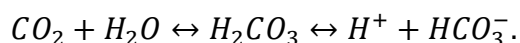


## Answer on Question #65989 - Chemistry - General Chemistry

**Question:** What does pH level change (increase or decrease) if I stir deionized water more and more? (for example: 20 times, 40 times, etc.). And explain it.

**Answer:** When deionized water, i.e. water free from any dissolved ions, gases etc., which would have pH close to 7 at normal conditions, is stirred or even simply left in open bottle so that it is exposed to open air, its pH will slowly decrease because it will dissolve different gases. The main dissolved gas which changes the pH will be CO<sub>2</sub>, also very small amounts of SO<sub>2</sub> and some other gases which form acids when dissolved in water may be present in air. It happens due to the reaction



The similar reactions can be written for SO<sub>2</sub> and some other gases present in very small amounts in air. Generally, when you measure the pH for any water which was exposed to air for any time, its pH will be lower than 7. The amounts of gases dissolved in water depend on temperature, pressure, the content of each gas in air and time of exposition to air, so under different conditions different amounts of CO<sub>2</sub> can dissolve in water, leading to the different values of pH change, but in general pH will always decrease (become more acidic) unless you don't have in air high amounts of such gases as ammonia which form bases when dissolved and increase the pH level thereof.

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