

Increase in ferrous ion by soaking basalt in acid water solution and UV rays

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Recent proven by the Mars explorer, it was shown that there was an ocean on Mars 43 billion years ago. That ocean might have been made of acid. Having this ocean as a precondition I did two following experiments to test this theory about mars.

In the first experiment, I measured density of ferrous ion which went into two kinds of solution ;solution neutralizing sulfuric and basalt: hydrochloric acid and basalt.

My result was that about 5 times more ferrous ion dissolved in pH1 hydrochloric acid than in pH2. In the second experiment I measured the density of ferrous ion in the case of going into solution when fayalite and basalt were soaked in purified water, hydrochloric acid, and sulfuric. And the other case was in the same condition with UV irradiated. Results show the denstiy of ferrous ion in the case of UV irradiation was 1.5 times higher than non UV irradiation.

As a result of these experimental results, a large quantity of ferrous ion might have been dissolved in Mar' s ocean because of the neutralization of the acid by rocks such as basalt. Furthermore, dissolved ferrous ion might have been increased by solar ultraviolet rays C.

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