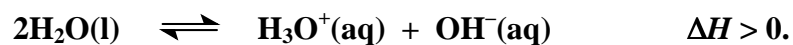


- The pH value of pure water at 25 °C is 7.00. How, if at all, does that value change when the temperature is changed to 37 °C (a person's body temperature)? Explain.

The auto-ionisation of water is an endothermic reaction



Increasing the temperature will push this reaction to the right (Le Chatelier's principle), so the $[\text{H}_3\text{O}^+(\text{aq})]$ will increase and the pH will therefore *decrease*.

Is pure water at 37 °C acidic, basic or neutral? Circle your choice.

acidic

basic

neutral

(Pure water is neutral as $[\text{H}_3\text{O}^+(\text{aq})] = [\text{OH}^-(\text{aq})]$. This is the criterion for a neutral solution NOT pH = 7.)