

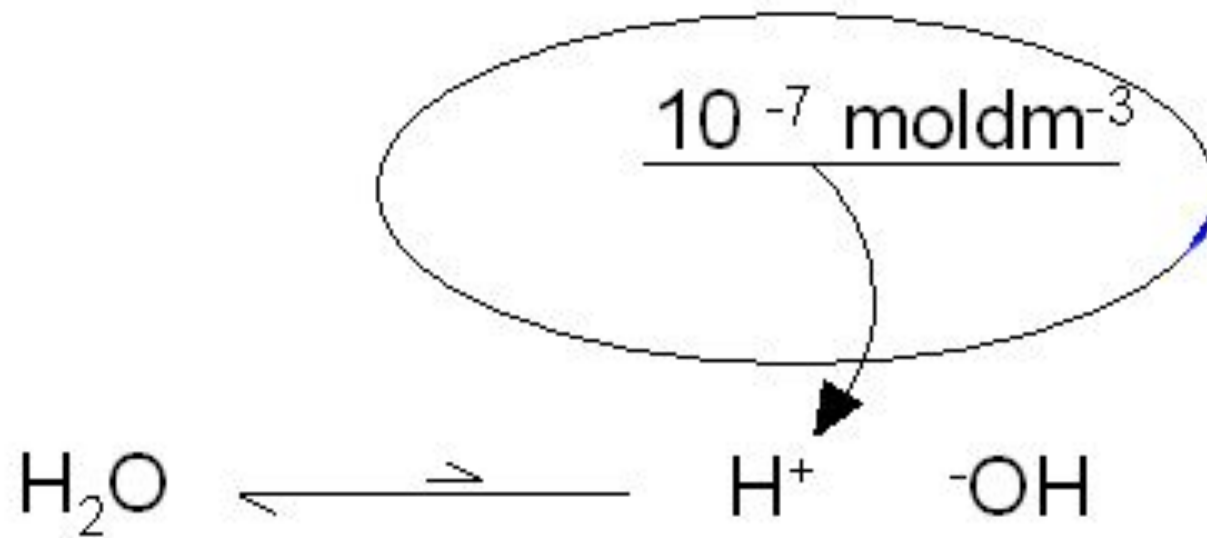
Acid Base Chemistry

1. Foundation knowledge
2. The pH scale
3. The pH of Water
 - a. Does water contain any H⁺?
 - b. Defining K_w
 - c. Numerical value of K_w and pK_w
4. Acids
5. Bases
6. Acid base titrations
7. Relative acidity and basicity – competition for H⁺

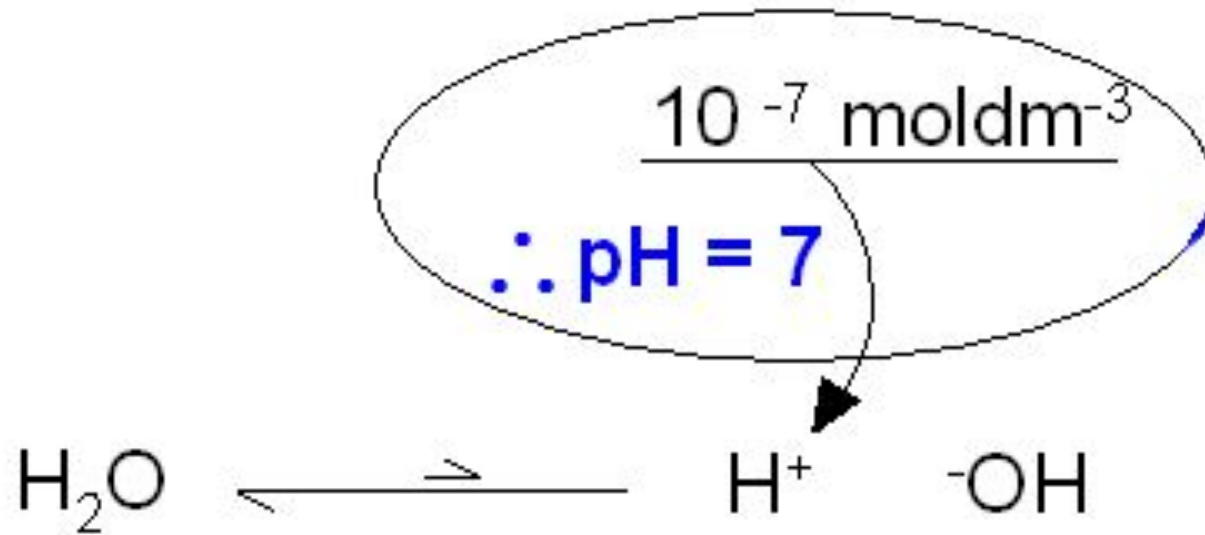
Does Water contain any H⁺?



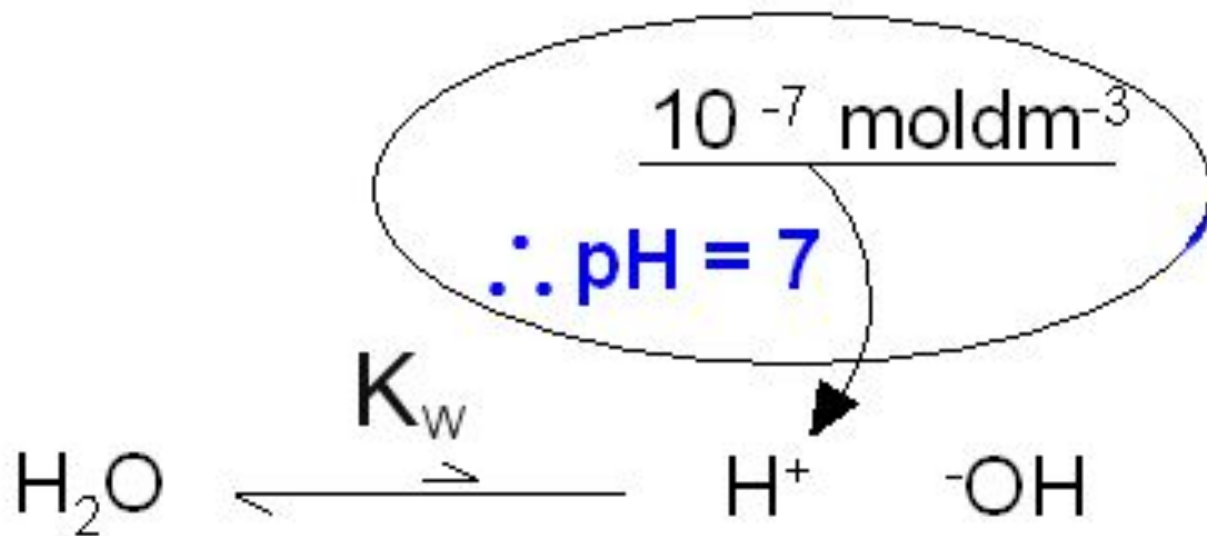
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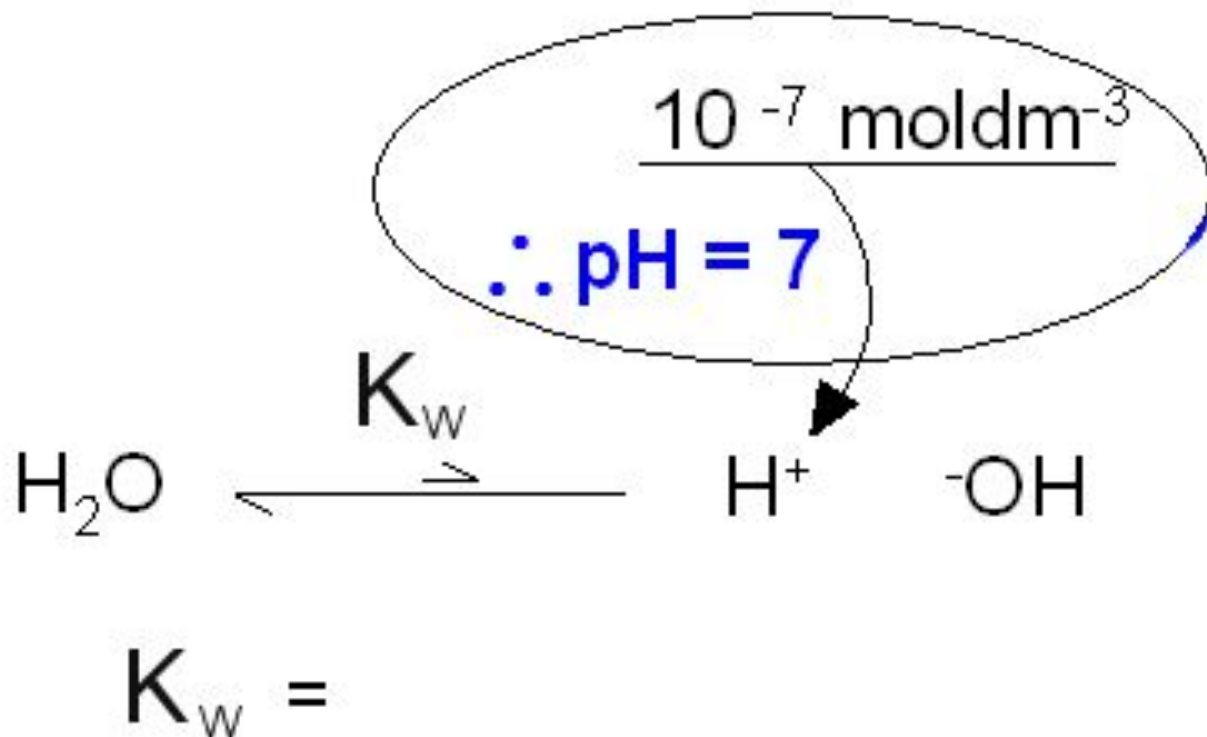
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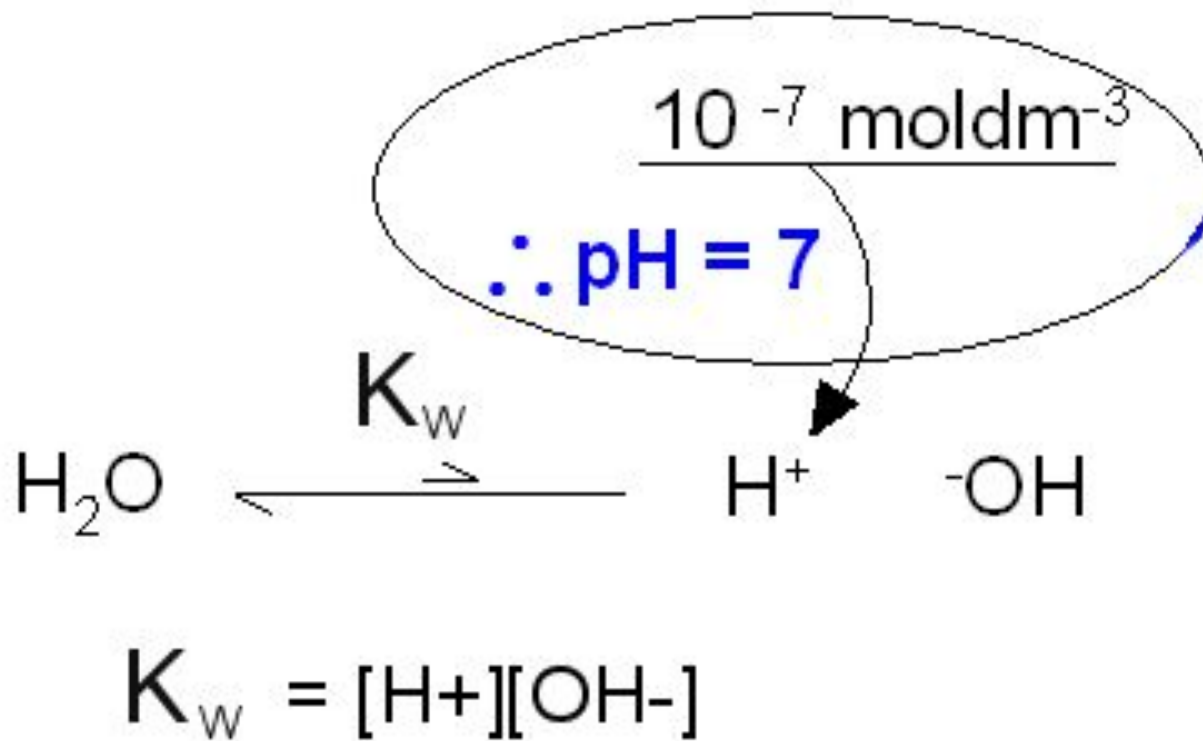
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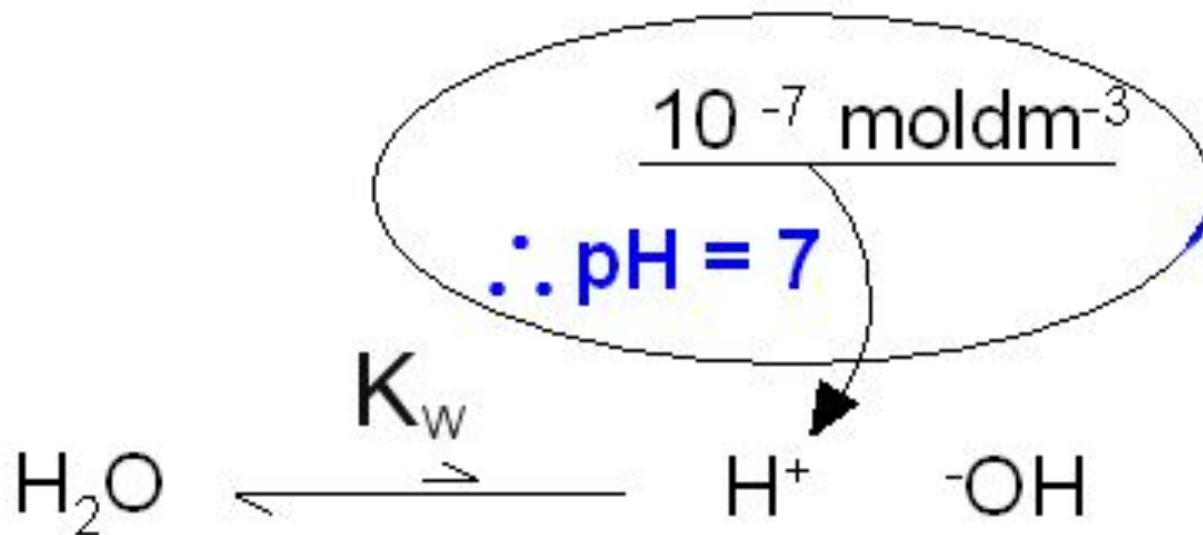
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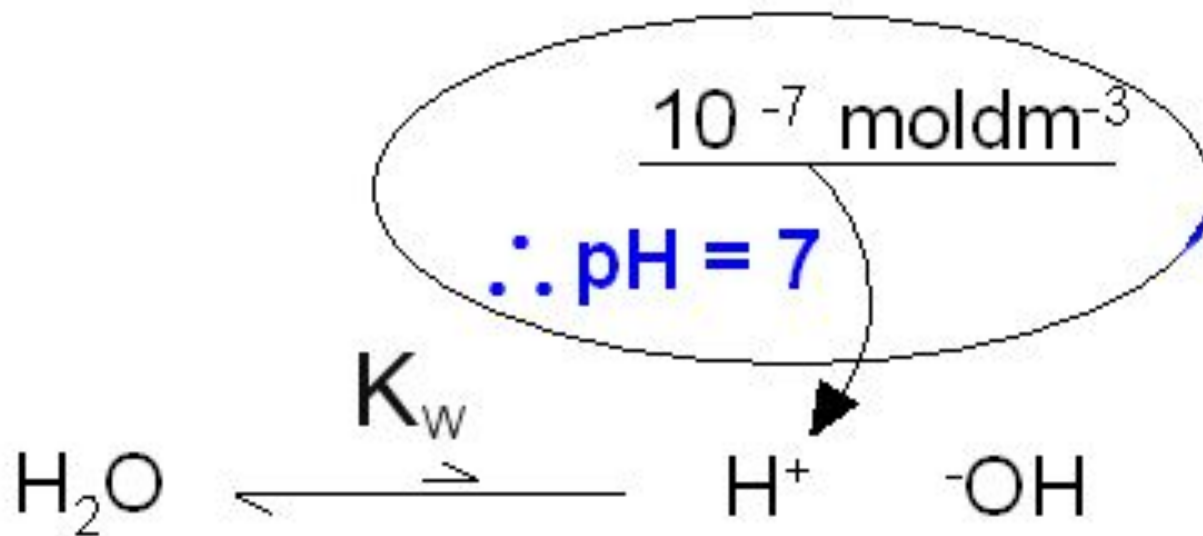
Does Water contain any H⁺?



$$K_w = [\text{H}^+][\text{OH}^-]$$

$$= 10^{-7} \times 10^{-7}$$

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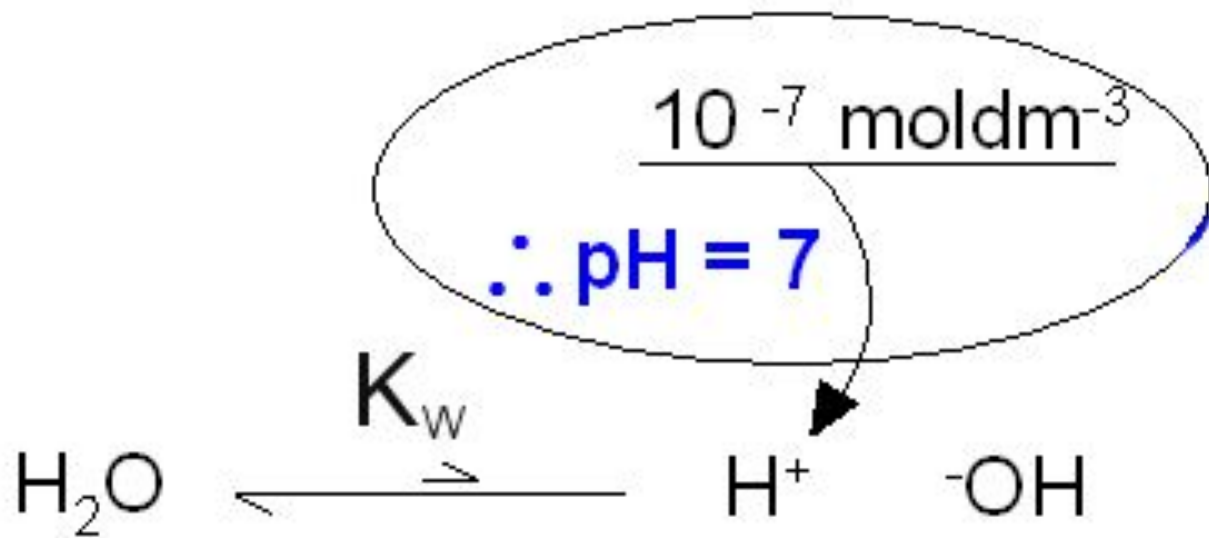


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$$\underline{\underline{K_w = 10^{-14}}}$$

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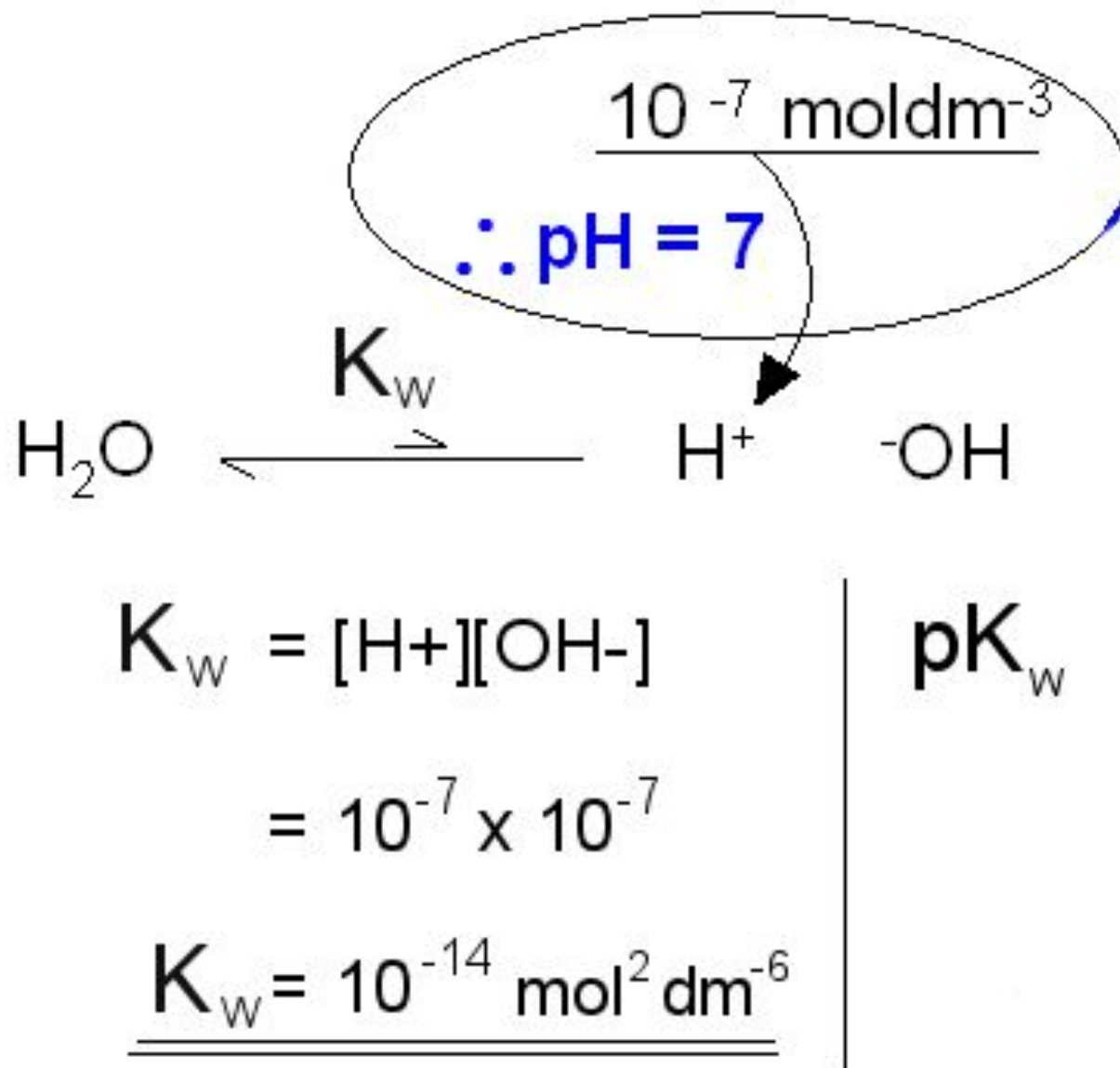


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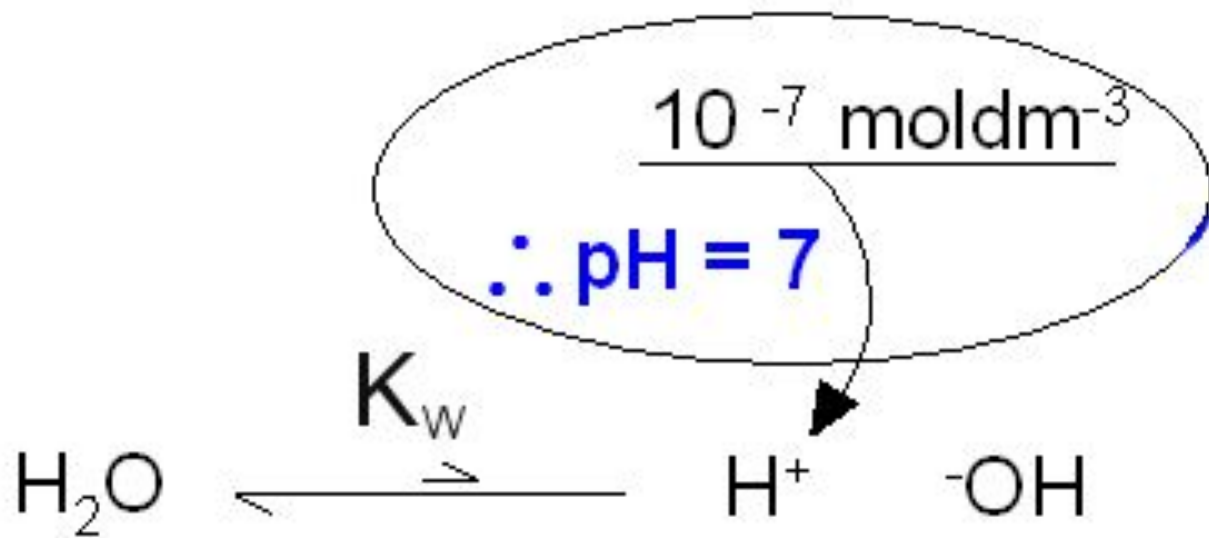
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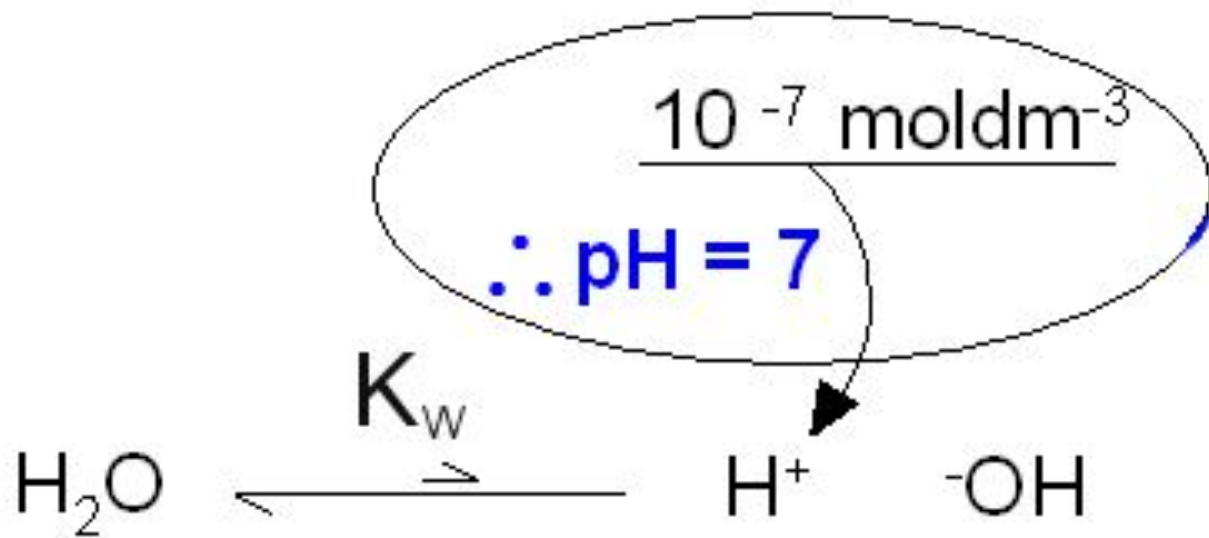
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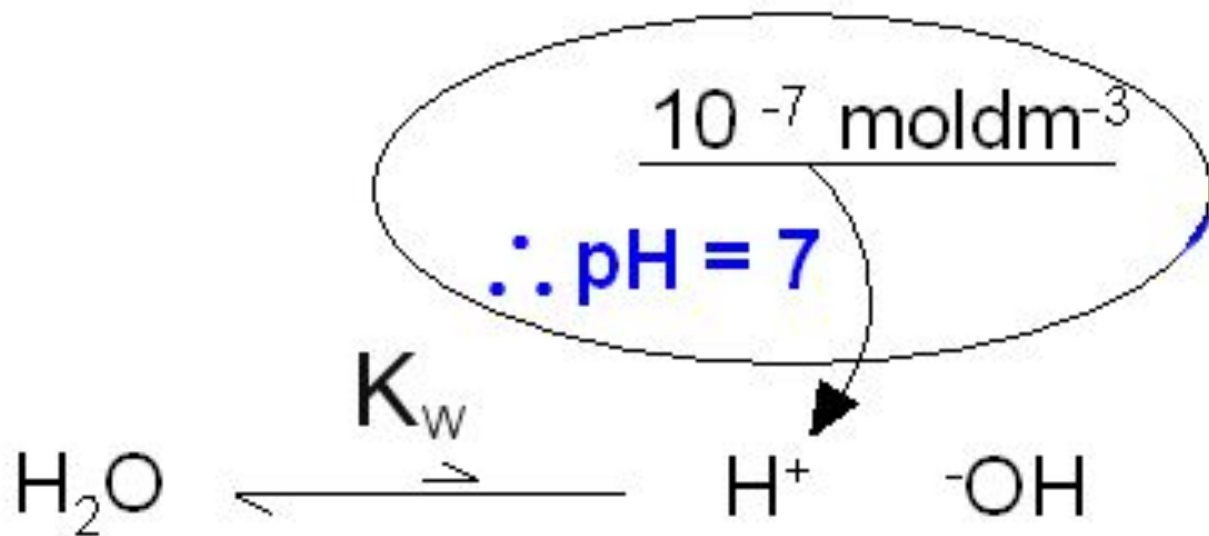
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$$\underline{\underline{\text{p}K_w = 14}}$$