

# Biogen Specific Teaching Material

Buffer and Media Preparation – What Is a Buffer?





# Questions & Answers

# Buffer and Media Preparation – What Is a Buffer?

## 1. What is a buffer solution?

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1. It is an aqueous solution that can resist pH change upon the addition of an acidic or basic components, neutralising small amounts of added acid or base, thus maintaining the pH.

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## 2. What is pH (in Chemistry)?

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2. It is a scale used to specify the acidity or basicity of an aqueous solution.

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3. Name (at least) three (3) acidic substances that have a pH value of less than 6.

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3. Possible answers: Battery acid, gastric acid, vinegar, orange juice, black coffee, acids (hydrochloric, nitric, sulphuric, etc.)



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4. What is the process of denaturation?

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4. It is a disruption of cell activity and can lead to cell death.

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5. Fill in the blanks: At 25 °C, solutions with a pH less than 7 are \_\_\_\_\_, and solutions with a pH greater than 7 are \_\_\_\_\_.

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5. At 25 °C, solutions with a pH less than 7 are acidic, and solutions with a pH greater than 7 are basic.

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6. What do lower/higher pH values correspond to?

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6. Lower pH values correspond to solutions which are more acidic in nature. Higher pH values correspond to solutions which are more basic or alkaline.

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7. What could ensue in a short amount of time if the buffering of blood is not restored to within a range of 7.34–7.45 pH?

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7. If buffering of blood is not restored to within a range of 7.34–7.45 pH, the consequence is potentially fatal.



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8. At room temperature, pure water has what pH level?

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8. It has a level of 7 (seven).

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9. What purpose do buffer solutions serve?

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9. They ensure that enzymes function correctly, keeping pH at a nearly constant value.

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10. At room temperature, or 25°C, pure water has a neutral pH of 7. (true or false?)

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10. True

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11. Buffer agents are used in a wide variety of chemical applications. (true or false?)

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11. True



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12. Solutions with a pH less than 7 are basic, and solutions with a pH less than 7 are acidic. (true or false?)

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12. False (It is the opposite)

# Thank you for your attention!

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