Buffer Solution

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PRESENTERS

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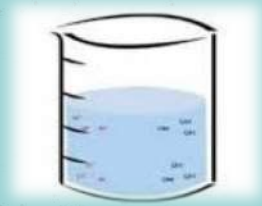
Objectives



Define

Buffer Solution

List

Type of Buffer Solution

Explain

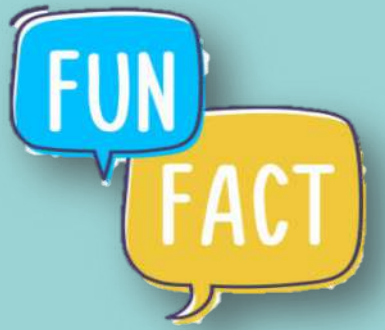
Uses of Buffer Solution

How to

Prepare The Buffer Solution

Buffer Solution

is one which maintains its pH fairly constant even upon the addition of small amounts of acid or base.



Did you know Sometimes a solution that is technically a buffer does NOT resist changes in ph.

Type of Buffer Solution

There are two types of buffer solution:

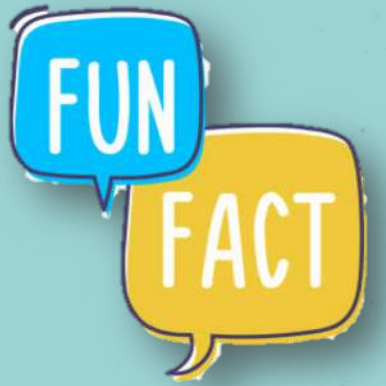
1-Acidic Buffer
2- Basic Buffer

Acidic Buffer

A weak acid together with a salt of the same acid with a strong base and it is have ph below 7. These are called Acidic Buffer.

Basic Buffer

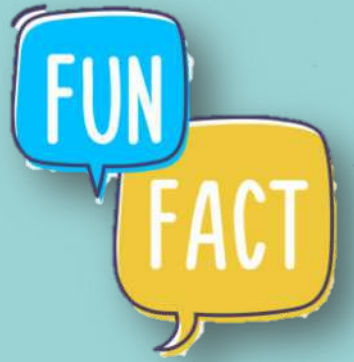
A weak base and its salt with a strong acid and it is have ph above 7. These are called Basic Buffers.



Did you know that A buffer is a solution that can resist pH change upon the addition of an acidic or basic components.

Uses of Buffer Solution

It is used to prevent any change in the pH of a solution, regardless of solute.. For example, blood in the human body is a buffer solution.

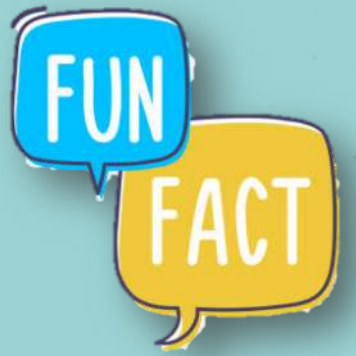


Did you know that A buffer is able to resist pH change because the two components (conjugate acid and conjugate base)

Preparation of Buffer Solution

THERE ARE A COUPLE OF WAYS TO PREPARE A BUFFER SOLUTION OF A SPECIFIC PH AND WE WILL TALK ABOUT ONCE OF THEM .

In the first method, prepare a solution with an acid and its conjugate base by dissolving the acid form of the buffer in about 60% of the volume of water required to obtain the final solution volume.



Did you know that Buffers function best when the pKa of the conjugate weak acid used is close to the desired working range of the buffer.

Summary

- It is one which maintains its pH fairly constant even upon the addition of small amounts of acid or base.

- There are two types of buffer solution:

I. Acidic Buffer
II. Basic Buffer

- It is used to prevent any change in the pH of a solution, regardless of solute
- There are a couple of ways to prepare a buffer solution of a specific pH.

References

- *https://www.slideshare.net/RIZWANABBAS3/buffer-solution-81189860*
- *https://courses.lumenlearning.com/boundless-chemistry/chapter/buffer-solutions/*


thank
you