

Information for veterinarians submitting to the Biosecurity Sciences Laboratory

10% neutral buffered formalin preparation for fixation of tissue samples for histopathology

The Biosecurity Sciences Laboratory would like to recommend the purchase and use of commercially prepared buffered formalin for tissue fixation and not 37% formaldehyde. Neutral buffered formalin (NBF) contains the buffers essential for the correct fixation of tissue samples. 37% formaldehyde mixed with water is not ideal for adequate fixation and creates issues with sample processing.

There are two options that we recommend when purchasing commercially prepared 10% NBF for the adequate fixation of tissue for histopathology.

1. 10% Neutral Buffered Formalin (NBF)

Ingredients:

- Formaldehyde, 37% distilled water
- Buffers (an essential part of NBF)
- Sodium phosphate, monobasic
- Sodium phosphate, dibasic

This is the cheaper and more convenient option as there is no preparation required as the solution is ready to use.

Just add a tap which can be purchased from a hardware store.



2. Formalin Buffered Concentrated (5X)

- Dilute 1 in 5 to prepare ready-to-use 10% Neutral Buffered Formalin with a pH 6.95 – 7.05
- 1 Litre of Concentrated (5X) and add 4 Litres of water to a total volume of 5L
- 5 Litres of Concentrated (5X) and add 20 Litres of water to a total volume of 25L



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