

HISTOPATHOLOGY SAMPLE REQUIREMENTS

For optimal sample fixation, tissues should be no larger than 1 cm thick and should be placed in 10% neutral buffered formalin with a 10:1 formalin-to-tissue ratio. If submitting multiple samples from the same animal, care should be taken to designate the location of each biopsy. This can be achieved by 1) inserting each biopsy into an individually-labeled histology cassette prior to submerging in formalin, 2) using colored sutures or surgical ink to label the tissue, or 3) placing the biopsies in separate formalin containers. Distinguishing specimens is of the utmost importance when sampling the same organ system more than once (i.e. removing multiple skin masses).



In the case of large or excisional biopsies in which the sample is greater than 1 cm thick, create serial parallel slices ("breadloaf") at approximately 1 cm intervals with cuts extending almost the full-thickness of the sample. This will allow formalin to penetrate into the tissue. For very large samples in which submission of the entire specimen is not feasible, representative sections should be selected for submission. The remainder of the specimen should be retained at the clinic in formalin in case additional sections are required.



Very small samples such as endoscopic, needle, core, pinch, or small-diameter punch biopsies should be handled as little as possible, placed in a histology cassette, and submerged in formalin to avoid tissue damage or loss. Also, unless protected by a cassette, very small samples should not be placed in the same formalin container as large specimens in order to avoid damage or loss.

Please do not overload the formalin container with an inappropriate size or number of samples, as this can result in inadequate fixation. Poor fixation may not only cause a delay in processing, but is likely to reduce the diagnostic quality of the samples and hinder microscopic evaluation/diagnosis. Also, do not include cytology samples in the same bag as formalin-fixed specimens.



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