



Cytology

Sample Collection Guidelines

- Use glass slides with a frosted end in order to properly label samples.
- Label glass slides with the animal's name and collection site on the frosted end. Use a sharp pencil, alcohol-proof ink pen, or another permanent labeling method. **Be sure to place the specimen and label on the same side of the slide.**
- Clean slides with alcohol and a lint-free cloth before use. Always handle slides and coverslips by the edges to prevent fingerprints, which can cause confusion in cytologic evaluation and alter interpretation of findings.

Sample Staining and Microscopic Evaluation Guidelines

- If possible, submit two to three Diff-Quik™ stained smears and two to three methanol-fixed unstained slides from each lesion. Prior to sending the cytologic samples, you are encouraged to examine the slides yourself and record your observations on the submission form. In this way, you also evaluate the suitability and staining quality of the sample, preventing submission of non-diagnostic specimens and potential delays in diagnosis.
- If possible, coverslip stained slides using 24 x 60-mm coverslips and permanent mounting media. Coverslipping protects the specimen and provides better optical clarity at higher magnifications.
 - If you do not have coverslip mounting media, place a drop or two of immersion oil between the slide and a coverslip and examine at 200X and 400X.
 - If a cytology staining kit is not available at your location, you may simply submit air-dried, unstained slides. Prevent exposure of unfixed/unstained cytologic specimens to formalin vapors; even limited exposure of cytologic specimens to formalin fumes will cause severe cellular distortion and non-diagnostic results.



Cytology (continued)

Sample Shipment Guidelines

- Send glass slides in labeled slide containers. Contact VLE if you need a supply of slide boxes or slide folders for mailing cytologic samples; we will send them if available. Ship plastic slide containers in sturdy cardboard boxes to help prevent breakage of glass slides.
- If you ship coverslipped slides, use “lay flat” cardboard slide folders instead of slotted plastic slide boxes; otherwise the slides can bind within the plastic box should mounting media seep from around the edges of the slide.
- When shipping cytologic samples together with formalin-fixed tissue, be sure the glass slides are in a secondary, airtight container (double plastic bags).
- **DO NOT SEND LIQUID SAMPLES FOR CYTOLOGIC DIAGNOSIS TO VLE. THEY WILL BE DISCARDED IMMEDIATELY UPON ARRIVAL.**
 - By the time liquid samples arrive at VLE, the cells have either autolyzed or undergone such morphologic change as to be non-diagnostic.
 - As an alternative, prepare air-dried unstained slides, as outlined above, from liquid samples.
 - For samples with low cellularity, such as effusions or urine, centrifuge the liquid in order to concentrate the cells. The cellular sediment from the liquid sample is then used to make the cytologic preparation.