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Technical Tips

Number: 00013

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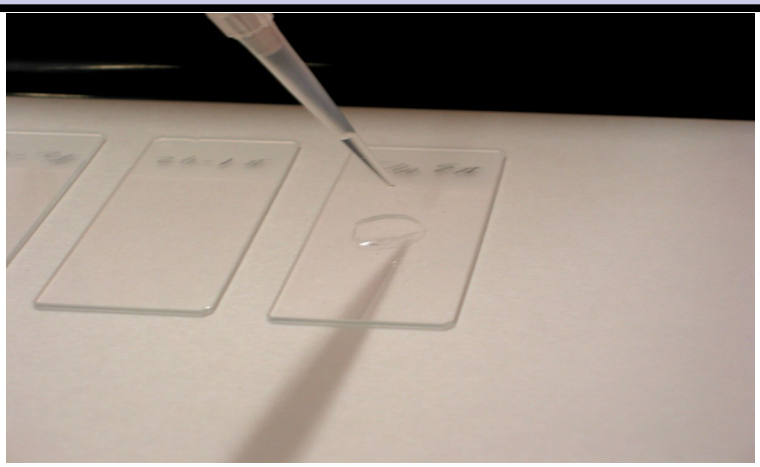

SUBJECT: Fine Needle Aspirate

TECHNICAL TIP OVERVIEW:

This Technical Tip offers suggestions on collection and processing of Fine Needle Aspirates. The main challenge with Fine Needle Aspirates are low cellularity and at times red blood cells.

In this Technical Tip, we will focus on collection and handling of the Fine Needle Aspirate.

TECHNICAL TIP: 00015

Fine Needle Aspirate Collection:

- COLLECT In **Liqui-PREP® Preservative Solution** - Many users use the **Liqui-PREP® Preservative Vials** (10ml) or **Liqui-PREP® PRO Collection vials** (8ml) for FNA collection.
- Bloody Specimens - If the specimen is observed to be bloody in the **Liqui-PREP® Preservative Vials** or **Liqui-PREP® PRO Collection vials**:
    - Pipette ~3ml of **Liqui-PREP® Lytic Reagent** into the specimen preservative vial and mix well.
    - Pour the specimen preservative vial into a 15ml centrifuge tube and centrifuge for 8 to 10 minutes at ~1,000xg.
    - Decant the supernatant
    - Pipette ~5ml of LP Preservative solution into the specimen centrifuge tube, mix and allow to preserve for at least 30 minutes prior to processing.

Processing the Fine Needle Aspirate:

- Allow at least 30 minutes for the specimen to Preserve - Prior to processing, when the specimen arrives in the laboratory, make sure the specimen is well preserved.

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Processing the Fine Needle Aspirate: (continued)

- Make sure the centrifuge is calibrated to obtain 1,000xg-force.– *Centrifugation is extremely important*. "Assuming" the centrifuge is running at the correct speed is not adequate. The centrifuge **should be calibrated** to run at 1000 g-force when the dials indicate that is the speed. Every laboratory should have a centrifuge tachometer for this calibration. If the centrifuge g-force is not correct, the cells will not pack in the pellet, thus some cells may be lost during decanting of the supernatant. Only swinging bucket centrifuges should be used for processing
- Fine Needle Aspirates.
- Removal of the supernatant technique - Novice laboratory personnel tend to carefully pour off the supernatant, which actually washes cells out of the centrifuge tube. The best action is to rapidly invert the centrifuge tube and holding it in that position until all the supernatant is removed from the centrifuge tube. Removal using a fine pasture pipette has been attempted by some laboratory personnel, which takes time and a very steady hand. These attempts have yielded poor results as compared to well packed cell pellets and proper decanting of the supernatant technique.
- How much Cell Base should be used - Because of the low cellularity, *"in centrifuge encapsulation"* is the best technique. After decanting, mix the pellet well. Pipette 50µl to 100µl into the well mixed specimen centrifuge tube. Mix again very well and proceed to inoculate the clean dry microscope slide with 50µl from the specimen centrifuge tube.

- PROCESSING SUMMARY:
  - ⇒ Allow at least 30 minutes for preservation (fixation) of the specimen.
  - ⇒ Make sure the centrifuge is operating at the correct speed. 1000 g-force is necessary for good cell packing.
  - ⇒ Only a swinging bucket centrifuge should be used for Fine Needle Aspirate**.**
  - ⇒ Decant - Rapidly invert the centrifuge tube, tube should be completely upside down, to remove the supernatant.
  - ⇒ Use 50µl to 100µl of **Liqui-PREP® Cellular Base Solution** (in centrifuge tube encapsulation).
  - ⇒ Mix the specimen centrifuge well and pipette 50µl of the specimen suspension onto a clean glass microscope slides.
  - ⇒ Dry, Stain and Read the slides.

Any Questions, Contact your local Liqui-PREP® Representative

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