



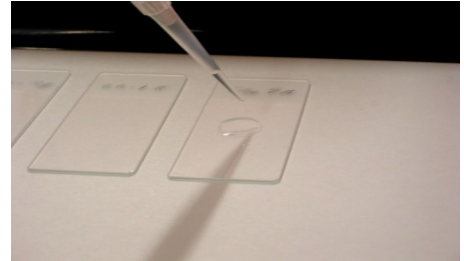
Liqui-PREP®

The Next Generation of Liquid Cytology

Technical Tips

Number: 00014

Date: 07/09/22



SUBJECT: Optimizing urine cytology preparations with Liqui-PREP®

TECHNICAL TIP OVERVIEW: Urine is considered to be a moderate volume, low cellular specimen which must first be concentrated to maximize cell harvesting. It is also ideal media for bacterial growth, therefore, if left at room temperature for over 4 hours, the specimens will no longer be as collected. Urine specimens should be preserved immediately after collection.

Specimen Preservation & Transport:

To avoid bacterial over growth while in transit to the lab for processing, **Liqui-PREP® Urine Preservative Solution** should be added to the specimen. **Liqui-PREP® Urine Preservative Solution** should be added in a 1:3 ratio, i.e. 120 ml urine: 40 ml of **Liqui-PREP® Urine Preservative Solution**. This will suppress bacterial over growth and maintain the pH of the urine. These specimens should be delivered to the laboratory as soon as possible (in at least 7 days from collection) Upon receipt in the lab, concentration and fixation needs to be performed as follows.

Specimen Concentration and Fixation:

Urine specimens generally contain few cells in a large volumes of urine. To maximize slide preparation, the cells must be concentrated into a cell pellet.

Depending on the cellularity, 1 or 2 concentrations may be needed. Straight Cytology, use one 50ml centrifuge tube.

Straight Cytology - use one 50ml centrifuge tube, 2 concentrations.

- * Mix the urine specimen and pour ~45ml into the 50ml centrifuge tube.
- * Centrifuge at 1,000xg for 10 minutes.
- * Decant the supernatant.
- * Mix the urine specimen (2nd time) and pour ~45ml or the residual of the specimen into the 50ml centrifuge tube.
- * Centrifuge at 1,000xg for 10 minutes.
- * Decant the supernatant.
- * Rinse into a 15ml centrifuge tube using either **Liqui-PREP® Preservative Solution** or **Liqui-PREP® Urine Preservative Solution** for Liqui-PREP slide production.

Note: Most times, one concentration of the urine specimen is adequate.



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If Performing FISH or other Molecular Testing:

- **Cytology** - use one 50ml centrifuge tube. Keep the residual of the preserved specimen for FISH or other Molecular Testing
 - * Mix the urine specimen and pour ~45ml into the 50ml centrifuge tube.
 - * Centrifuge at ~1,000xg for ~10 minutes.
 - * Decant the supernatant.
 - * Rinse into a 15ml centrifuge tube using either **Liqui-PREP[®] Preservative Solution** or **Liqui-PREP[®] Urine Preservative Solution** for Liqui-PREP slide production.

NOTE: Fresh Urine specimens should be allowed to Preserve and Fix for 1 hour prior to processing.

NOTE: **Liqui-PREP[®] Cellular Base Encapsulated Cells** can not be used for FISH or other Molecular Testing.

Slide Preparation:

After the fixation and concentration into a 15ml centrifuge tube, centrifuge the specimen at ~1,000xg for ~10 minutes.

Decant the supernatant.

"In Centrifuge Tube Encapsulation", Pellets **under 1mm** in size:

- Mix the cell pellet well. Pipette 50µl to 100µl of **Liqui-PREP[®] Cellular Base Solution** into this specimen centrifuge tube.
- Mix the specimen centrifuge tube well and pipette 50µl of the specimen on to a clean dry microscope slide.

"Working Tube Encapsulation", Pellets **over 1mm** size:

- Pipette 200µl to 400µl of **Liqui-PREP[®] Cellular Base Solution** into the "Working Tube".
- Mix the specimen cell pellet well and pipette 50µl into the "Working Tube".
- Mix the Working Tube well and pipette 50µl of the specimen onto a clean dry microscope slide

Allow the slides to dry, stain and Read.

Examples:

The following page contains examples of urine preparations.



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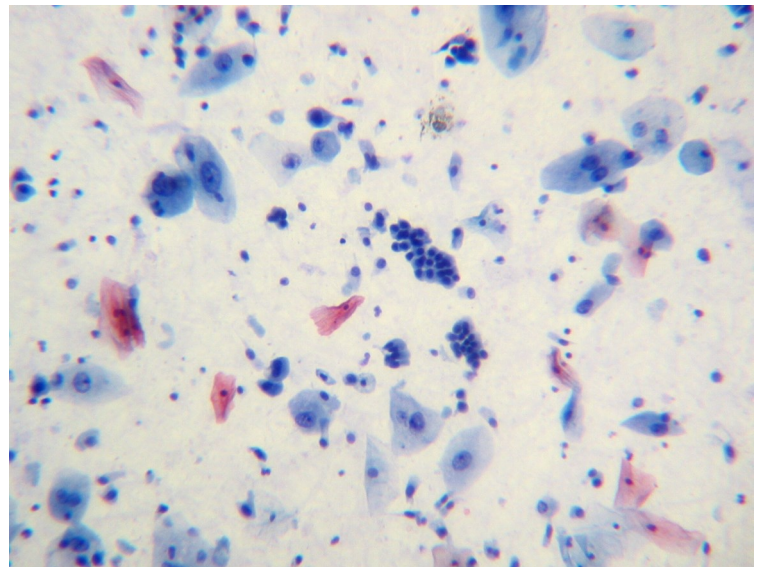
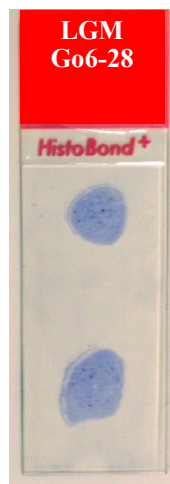
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Liqui-PREP[®] URINE SPECIMEN EXAMPLE

The picture to the right shows 1 specimen with 2 circles on the slide from the same specimen. The top circle is 10 mm in diameter and the bottom circle is estimated to be 13 mm.



The above picture is 10x magnification. Notice there is good cellularity and cell distribution. The cells are well presented with good nuclear definition.

Any Questions, Contact your local Liqui-PREP[®] Representative

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