Liqui-PREP® Manual Cytology Processing for URINE

This Document is intended as a quick reference guide for several manual methods used to process inoculated **Liqui-PREP® Urine Preservative Cups.**

This is only a guide to obtain the intended results for urine cytology. Protocols can vary depending on the needs or requirements of each individual Laboratory. Please contact LGM International Inc. for recommendations when specific results are needed.

NOTE: Molecular Triage is not compatible with specimens after the addition of Liqui-PREP® Cellular Base Solution. Working Tube Dilution retains an ideal specimen aliquot in the 15ml Centrifuge tube that is compatible with a wide variety of analysis and genetic testing.

IN-TUBE PROCESSING

RAPID IN-TUBE PROCESSING—Standard processing

1. Mix the **Liqui-PREP® Urine Preservative Cup + Specimen** well. (using a Vortex Mixer for 30 seconds to 1 minute)	2. Pipette or pour 50ml of **Liqui-PREP® Urine Preservative + specimen** into each 50ml Centrifuge Tube. (2 tubes are needed.)	**3.** The Specimens should be centrifuged at ~1000xg for ~10 minutes. Decant the supernatant by carefully inverting the 50ml Centrifuge Tubes. (Do Not Shake)	**4.** Mix the Centrifuge Tube Pellets well to create a homogeneous suspension.	**5.** Pour the mixed pellet from the 50ml C-tubes into a single **15ml** C-tube. Then rinse the 50ml tubes into the 15ml tube a few times using **Liqui-PREP® Urine Preservative** to collect any remaining cells. (Use up to 6ml of **Liqui-PREP® Urine Preservative** for rinsing.)	**6.** Centrifuge the specimen in the 15ml C-tube again at ~1000xg for ~10 minutes
7. Decant the supernatant by quickly inverting the 15ml Centrifuge Tube. (Do Not Shake)	**8.** Mix the Centrifuge Tube Pellet well with a Vortex Mixer to create a homogeneous suspension.	**9.** Depending on pellet size, Pipette 50-150µl of **Liqui-PREP® Cellular Base Solution** into the 15ml Centrifuge Tube (*1ml Pipette Tip*)	**10.** Mix the 15ml Centrifuge Tube well with a Vortex Mixer for ~10 seconds	**11.** Use Reverse Pipetting to Aspirate >50µl into the Pipette Tip. Then Deposit only 50µl onto the middle of the inoculation circle on the Microscope Slide. Spread the aliquot to the edges of the circle (*100µl Pipette Tip*). Allow the Slides to Dry, then Stain and Read.	**NOTE:** IN-Tube dilution is ideal for most low cellular pellets resulting in the best possible cellularity on the slide, but is **not compatible with molecular triage.**

LOWER COST IN-TUBE PROCESSING—Fewer Consumables Used

1. Mix the **Liqui-PREP® Urine Preservative Cup + Specimen** well. (using a Vortex Mixer for 30 seconds to 1 minute)	**2.** Pipette or pour 50ml of **Liqui-PREP® Urine Preservative + specimen** into a 50ml Centrifuge Tube.	**3.** Centrifuge specimen, carefully decant, (**optional concentration** - then add the remaining 50ml of the corresponding specimen on top of the original pellet, then re-centrifuge the specimen and carefully decant.)	4. Mix the Centrifuge Tube Pellet well to create a homogeneous suspension.	**5.** Pour the mixed pellet from the 50ml C-tube into a **15ml** C-tube. Then rinse the 50ml tube into the 15ml tube a few times using **Liqui-PREP® Urine Preservative** to collect any remaining cells. (Use up to 6ml of **Liqui-PREP® Urine Preservative** for rinsing.)	**6.** Centrifuge the specimen in the 15ml C-tube again at ~1000xg for ~10 minutes
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WORKING TUBE PROCESSING

RAPID WORKING TUBE PROCESSING—Retains a specimen aliquot that is ideal for additional analysis or genetic testing.

1. Mix the **Liqui-PREP® Urine Preservative Cup + Specimen** well. (using a Vortex Mixer for 30 seconds to 1 minute)	**2.** Pipette or pour 50ml of **Liqui-PREP® Urine Preservative + specimen** into each 50ml Centrifuge Tube, (2 tubes are needed.)	**3.** The Specimens should be centrifuged at ~1000xg for ~10 minutes. Decant the supernatant by carefully inverting the 50ml Centrifuge Tubes (Do Not Shake)	**4.** Mix the Centrifuge Tube Pellet well to create a homogeneous suspension.	**5.** Pour the mixed pellet from the 50ml C-tubes into a single **15ml** C-tube. Then rinse the 50ml tubes into the 15ml tube a few times using **Liqui-PREP® Urine Preservative** to collect any remaining cells. (Use up to 6ml of **Liqui-PREP® Urine Preservative** for rinsing.)	**6.** Centrifuge the specimen in the 15ml C-tube again at ~1000xg for ~10 minutes
7. Decant the supernatant by quickly inverting the 15ml Centrifuge Tube. (Do Not Shake)	**8.** During Centrifugation, Pipette 200-400µl of **Liqui-PREP® Cellular Base Solution** into the Working Tube. (*1ml Pipette Tip*)	**9.** Mix the Centrifuge Tube Pellet well with a Vortex Mixer to create a homogeneous suspension.	**10.** Immediately following mixing, Pipette 50µl of the well mixed Pellet into the Working Tube. Then Mix the Working Tube well with a Vortex Mixer for ~10 seconds. (*100µl Pipette Tip*)	**11.** Use Reverse Pipetting to Aspirate >50µl into the Pipette Tip. Then Deposit only 50µl onto the middle of the inoculation circle on the Microscope Slide. Spread the aliquot to the edges of the circle. Allow the Slides to Dry, then Stain and Read. (*100µl Pipette Tip*)	**NOTE:** Working Tube dilution will retain cells in the Centrifuge Tube that are not yet encapsulated and **can be used for molecular triage**.

LOWER COST WORKING TUBE PROCESSING—Fewer Consumables Used and Retains a specimen aliquot that is ideal for additional analysis or genetic testing.

1. Mix the **Liqui-PREP® Urine Preservative Cup + Specimen** well (using a Vortex Mixer for 30 seconds to 1 minute)	**2.** Pipette or pour 50ml of **Liqui-PREP® Urine Preservative + specimen** into a 50ml Centrifuge Tube.	**3.** Centrifuge specimen, carefully decant, (**optional concentration** - then add the remaining 50ml of the corresponding specimen on top of the original pellet, then re-centrifuge the specimen and carefully decant.)	**4.** Mix the Centrifuge Tube Pellet well to create a homogeneous suspension.	**5.** Pour the mixed pellet from the 50ml C-tube into a **15ml** C-tube. Then rinse the 50ml tube into the 15ml tube a few times using **Liqui-PREP® Urine Preservative** to collect any remaining cells. (Use up to 6ml of **Liqui-PREP® Urine Preservative** for rinsing.)	**6.** Centrifuge the specimen in the 15ml C-tube again at ~1000xg for ~10 minutes
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