



# Liqui-PREP® General Cytology Processing Directional Insert

QF-720-114

REV-F 8-10-22

## Liqui-PREP® Cytology and Special Liquid Cytology Processing Kit

**Summary & Explanation:** The Liqui-PREP® Cytology and Special Cytology Processing Kits are for the processing of cytology specimens post collection into a liquid, thin layer format resulting in a prepared slide ready for staining and examination.

### Content of the kits Summary & Composition:

The Liqui-PREP® Cytology Processing kits contain various combinations of the following components:

**Liqui-PREP® Preservative Solution** – For preservation of cytology specimens post collection. Active ingredients – Low alcohol solution with denatured ethanol, buffers, stabilizers and water. Request published SDS sheets.

**Liqui-PREP® Cellular Base Solution** – For cellular dilution, encapsulation and adherence of cells to glass microscope slides. Active ingredients – Low alcohol solution with ethanol, buffers, stabilizers and water. Request published SDS sheets.

**Liqui-PREP® Cleaning Solution** – For removing mucous and other non-cellular debris by density. Active ingredients – Starch, stabilizers and water. Request published SDS sheets.

### Materials Required but not provided:

- Centrifuge - Swinging Bucket Model
- Glass Microscope Slides
- Vortex Mixer
- Pipettors (50µl; 100µl to 500µl; 5ml) and tips
- Small Test Tubes (Working Tubes)
- Or an **Auto-LP® PRO**

### Stability and Storage:

**Liqui-PREP® Reagents**, stored properly, are stable until the labeled expiration date.

Specimens collected in the **Liqui-PREP® Preservative Solution** are stable for 60 days at 10°C to 30°C for cytology processing.

Store kits at 10°C to 30°C out of direct sunlight.

### WARNING:

**Liqui-PREP® Reagents** contain a dilute mixture of denatured ethanol. For laboratory use. Not intended for human consumption. Do not reuse.

**Principals of the Process:** There are 3 basic steps. (Manual or Automated)

**Step 1 – Specimen Preparation** – Post Collection, specimen preparation is performed using classical laboratory techniques to process the collected specimens into a 15ml Centrifuge tube. If mucous is suspected in the specimen, an aliquot of **Liqui-PREP® Cleaning Solution** is added into the 15ml centrifuge tube prior to adding the specimen. See Technical Tips 11, 13, 14, 15 & 16.

**Step 2 – Cleaning and/or Concentration** – After Specimen Preparation, the 15ml specimen centrifuge tube is centrifuged at ~800xg to ~1,000xg for approximately 10 minutes.

**Step 3 – Cellular Encapsulation** – After cleaning and/or concentration, the supernatant is removed by decanting or aspiration, leaving a cellular pellet. The cellular pellet is mixed well. An aliquot of this pellet is diluted using **Liqui-PREP® Cellular Base Solution** to encapsulate the cells and to adhere an aliquot of the suspension to a glass microscope slide.

### General Processing Procedure: (Manual processing)

**Step 1: Specimen Preparation** – There are three basic types of preparations. Low Cellular (CSF) Vial Collected specimen (Cervical, Buccal) and Moderate to Large Volume Specimens (Urine, Sputum, etc.)

**Low Cellular** - Specimen is rinsed numerous times with **Liqui-PREP® Preservative Solution** into a 15ml centrifuge tube.

**Vial Collected Specimens** - Mix the specimen vial well and pour into a 15ml centrifuge tube. If mucous is suspected, 4ml of **Liqui-PREP® Cleaning Solution** is added prior to adding the specimen for processing.

**Moderate to Large Volume Specimens** - These specimens require preparation depending on the type of specimen. The specimen is prepared first in a 50ml centrifuge tube using 1000xg centrifugation. After centrifugation is complete, the specimen is decanted then mixed and rinsed into a 15ml centrifuge tube using **Liqui-PREP® Preservative Solution**. See Technical Tips 12, 13, 14, & 15 for suggestions regarding specimen preparation.

**Step 2: Cleaning and/or Concentration** - After the specimen is prepared and/or rinsed into a 15ml centrifuge tube, centrifuge at ~800xg to ~1,000xg for manual processing or ~300xg to ~600xg (depending on the mode) for **Auto-LP® PRO** processing. (See the **Auto-LP® PRO** Manual)

**Step 3: Cellular Encapsulation: (WORKING TUBE METHOD)** - Use for all types of specimens, except Very Low Cellular Specimens

Pipette ~300µl to ~500µl of **Liqui-PREP® Cellular Base Solution** into a small test tube "Working Tube".

Decant the 15ml centrifuge by rapidly inverting the tube. Do Not Blot!

Mix the cellular pellet well to produce a reasonably homogeneous suspension

Pipette ~50µl of the well mixed pellet into the "working tube" containing **Liqui-PREP® Cellular Base Solution**.

Mix the "working tube" well.

Pipette ~50µl of the well mixed "working tube" suspension onto a clean, dry microscope slide.

Allow to dry, then stain and read.

**Optional: Low Cellularity Encapsulation: (IN CENTRIFUGE TUBE ENCAPSULATION)** - use for Very Low Cellular Specimens

Decant the 15ml centrifuge by rapidly inverting the tube. Do Not Blot!

Depending on the pellet size, pipette ~50µl to ~100µl of **Liqui-PREP® Cellular Base Solution** directly into the 15ml specimen centrifuge tube.

Mix the diluted pellet well to produce a reasonably homogeneous suspension.

Pipette ~50µl of the well mixed suspension onto a clean, dry microscope slide.

Allow to dry, then stain and read.

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EC REP

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### Quality and Warranty:

All Liqui-PREP® reagents are manufactured under an audited ISO 13485:2016 Quality System. LGM International, Inc.'s Quality Management System is certified to ISO 13485:2016 by Orion Registrar, Inc.

LGM International, Inc. disclaims all warranties, express or implied, including any implied warranties of commercialization and fitness for a particular use. LGM International shall not be liable for any incidental or consequential damages. Under no conditions shall LGM International's liability to the customer under any claim exceed a refund of the amount paid to LGM International, Inc. for the product or service which is the claim's subject.

### Liqui-PREP® 30 SERIES KIT CONFIGURATIONS

LGM	Liqui-PREP® Preservative Solution		Liqui-PREP® Cellular Base Solution					Centrifuge Tubes
	10ml	990ml	26ml	38ml	75ml	115ml	225ml	
Fill:	10ml	990ml	26ml	38ml	75ml	115ml	225ml	100/Box
Product #	Vials	Bottles	Bottles	Bottles	Bottles	Bottles	Bottles	Boxes
30-1001	100			2				
30-300	300						1	1
30-300A	300			2				3
30-3001	300						1	
30-3001A	300			2				
30-3001B	300					2		
30-100B		2	2					1
30-100B1		2	2					

### Liqui-PREP® 40 SERIES KIT CONFIGURATIONS

LGM	Liqui-PREP® Preservative Solution		Liqui-PREP® Cleaning Solution	Liqui-PREP® Cellular Base Solution		15ml Centrifuge Tubes
	10ml	410ml	38ml	225ml	100/Box	
Product #	Vials	Bottles	Bottles	Bottles	Boxes	
40-100	100	1	2		1	
40-1001	100	1	2			
40-300	300	3		1	3	
40-3001	300	3		1		

### Liqui-PREP® PRO SERIES KIT CONFIGURATIONS

LGM	Liqui-PREP® Preservative Solution		Liqui-PREP® Cleaning Solution	Liqui-PREP® Cellular Base Solution	15ml Centrifuge Tubes
	8ml	990ml	410ml	115ml	
Product #	Vials	Bottle	Bottle	Bottles	
55-6400	400		1	2	
55-6200	200			1	
55-6201	400			2	
55-7200		3		2	
60-7000	400				

### Liqui-PREP® ACCESSORIES CONFIGURATIONS

LGM	Liqui-PREP® Preservative Solution				Liqui-PREP® Cleaning Solution	Liqui-PREP® Cellular Base Solution	Liqui-PREP® Lytic Solution	15ml Centrifuge Tubes
	10ml	990ml	1880ml	3750ml	410ml	225ml	990ml	
Product #	Vials	Bottles	Bottles	Bottles	Bottles	Bottle	Bottles	Boxes
60-010	200							
60-1000		4						
60-2000			4					
60-4000				4				
70-300					3	1		3
70-3001					3	1		
70-500					6			
70-5001					2			
80-1000							4	

### Notes for User:

- The **Liqui-PREP® Reagents** and methods are the back up method to the **Auto-LP® PRO** Cytology Processing Instrument.
- The **Liqui-PREP® Preservative Solution** is designed to be a biological preservative. It is being used throughout the world for Reflex testing for Virus, Molecular Markers and other additional tests. SunCoast Pathology Laboratory, U.S.A., after verification, has implemented the use of **Liqui-PREP®** for Molecular testing for over 10 years. Follow Good Laboratory Practices to verify in any laboratory.



CLASS 1 REGISTRATION



U.S. FOOD & DRUG ADMINISTRATION

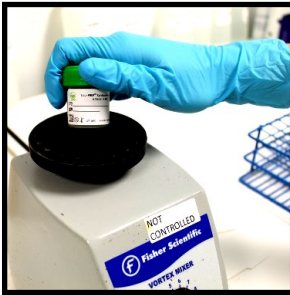


ISO 13485:2016 CERTIFIED



## Working Tube Method

This method is used for processing most types of cytological specimens with average cellularity (Cervical, Buccal, Anal, etc.)



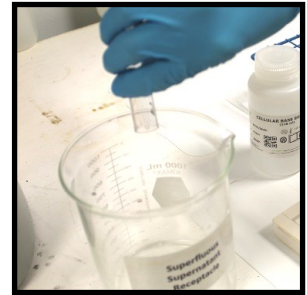
1. Mix the Vial well (using a Vortex Mixer for 30 seconds to 1 minute) Pour mixed Vial contents into a 15ml Centrifuge Tube. (not exceeding 13ml)



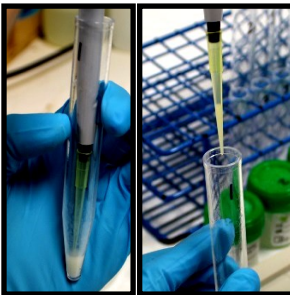
2. The Specimen should be centrifuged at ~800xg for ~10 minutes



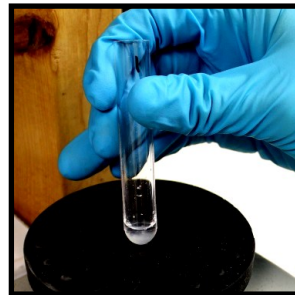
3. During Centrifugation, Pipette 400µl of **Liqui-PREP® Cellular Base Solution** into the Working Tube (1ml Pipette Tip)



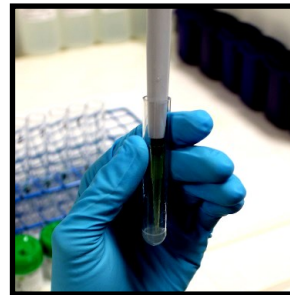
4. Decant the supernatant by quickly inverting the 15ml Centrifuge Tube (Do Not Shake)



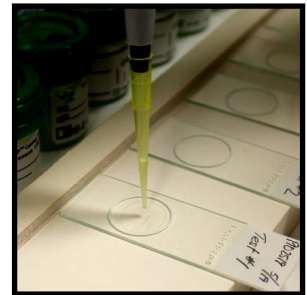
5. Mix the Centrifuge Tube Pellet well with a Vortex Mixer to create a homogeneous suspension. Immediately following mixing, Pipette 50µl of the mixed Pellet into the Working Tube (100µl Pipette Tip)



6. Mix the Working Tube well with a Vortex Mixer for ~10 seconds



7. Use Reverse Pipetting to Aspirate >50µl into the Pipette Tip. (100µl Pipette Tip)



8. 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.

CLASS 1  
REGISTRATION

FDA U.S. FOOD & DRUG  
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