PROCEDURE

Title: URISYSTEM DECISLIDE MICROSCOPIC EXAM

Procedure #: 2015URINALYSIS01

Institution: Highlands Regional Medical Center

Address: 3600 Highlands Avenue, Sebring Florida 33870

Prepared by: Anita Smith Date: 6/2/2015

Title: Laboratory Administrative Director

Accepted by: _____ Date: 6-2-15

Title: Laboratory Medical Director

Date Patient Testing Implemented: 6/2/15

Review of procedure every two years

Reviewed by: _____ Date: _____

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Reviewed by: _____ Date: _____

Reviewed by: _____ Date: _____

Reviewed by: _____ Date: _____

Discontinued testing date: _____

Policy Title: UriSystem Decislide Microscopic Exam

Audience: Laboratory Staff

References and Citations: UriSystem Decislide System Package Insert

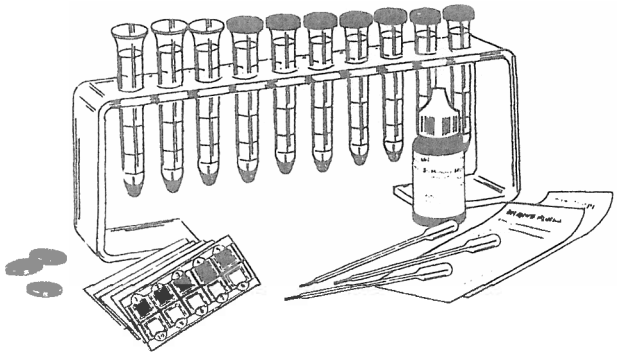
Purpose:

UriSystem procedure is a standardized, volume sample, time, and speed of centrifugation, sediment concentration, and slide chamber volume and depth. All of these help eliminate procedural and technical variability so that laboratories achieve the highest level of testing confidence.

Procedure:

1. Centrifuge 12 mL of urine at 1800 rpm (450rcf) for 5 minutes.
2. Completely decant the tube with a smooth quick tilting motion. Do not shake or otherwise disturb the surface tension that holds a precise volume of sediment in the tip of the tube.
3. Mix the sediment well and deliver one drop to the Decislide scalloped area. Capillary action will uniformly distribute 14 microliters of sediment into the chamber.
4. Low Power Field Examination
   a. Examine at least ten fields of the preparation under low power with reduced light.
   b. Enumerate casts using a reasonable range per LPF. Identify types of casts on high power.
   c. Evaluate mucus and crystals using laboratory format.
5. High Power Field Examination
   a. Examine at least ten fields of the preparation under high power with increased light.
   b. Evaluate the presence of squamous and transitional epithelial cells using laboratory format.
   c. Enumerate red blood cells, white blood cells, and renal tubular cells using reasonable range per HPF.
   d. Evaluate bacteria, motile Trichomonas, yeast, parasites, fungus, and fat using lab format. Comment on budding yeast or mycelial forms of yeast.

How to use the *Fisherbrand*® UriSystem

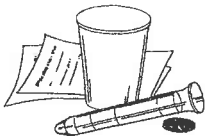


Until now, consistent results from microscopic urine sediments analysis have always been difficult to obtain. Fisher HealthCare's UriSystem brings proven precision, accuracy, uniformity, safety, convenience, and economy to this important clinical procedure.

UriSystem uses 0.40 mL of suspended sediment, while other systems use a full 1.0 mL. Because UriSystem uses a more concentrated sample, there is a 60% greater probability of identifying those urine constituents that occur in low numbers, but whose presence is always clinically significant. Every step of the UriSystem procedure is standardized; volume of sample, time and speed of centrifugation, sediment concentration, and slide chamber volume and depth. All of these help eliminate procedural and technician variability so that laboratories achieve the highest level of testing confidence.

Instructions

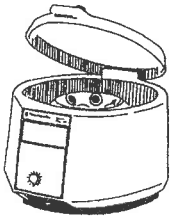
1. Use the complete UriSystem Collection Pack (collection cups, tubes, labels, and caps) as the means of collection and transport to the laboratory.



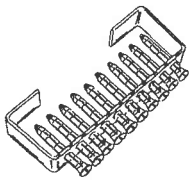
2. Perform the usual specific gravity, physical, and chemical analyses of the sample.

3. Centrifuge 12 mL urine in the UriSystem Tube, at 1800 rpm (450 rcf) for 5 minutes.

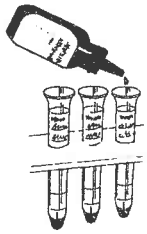
Note: Routine testing requires only 12 mL of specimen. The remaining 3 mL of urine collected in the UriSystem tube may be used for other tests if needed.



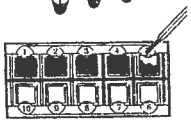
4. Completely decant the tube(s) with a smooth quick tilting motion. Do not shake or otherwise disturb the surface tension that holds a precise volume of sediment in the tip of the tube.



5. If you wish to stain the sediment, add one drop (40 µL) of UriSystem Stain to the residue in the tip of the tube.



6. Mix the sediment well and deliver one drop to the Decislide as described on the reverse side of this page.



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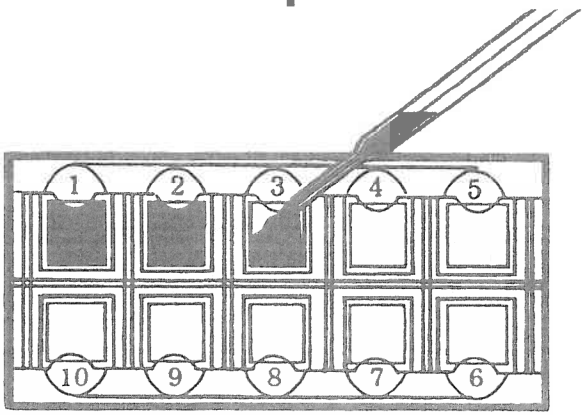
Slide Preparation

Figure 1



UriSystem DeciSlide Instructions

1. Mix the urine sediment well and deliver one drop onto the scalloped area as indicated in Figure 1. Capillary action will uniformly distribute 14 µL of sediment into the chamber.
2. Low Power Field Examination
   - **a.** Examine at least ten fields of the preparation under low power (10 x objective) with reduced light.
   - **b.** Enumerate casts using a reasonable range/LPF. Identify types of casts on high power (40 x objective).
   - **c.** Evaluate mucus and crystals using lab format.
3. High Power Field Examination
   - **a.** Examine at least ten fields of the preparation under high power (40 x objective) with increased light.
   - **b.** Evaluate the presence of squamous and transitional epithelial cells using laboratory format.
   - **c.** Enumerate red blood cells, white blood cells, and renal tubular cells using reasonable range/HPF.
   - **d.** Evaluate bacteria, motile trichomonads, yeast, parasites, fungus, and fat using lab format. Comment on budding or mycelial forms of yeast.

Normal Values

The table below compares suggested normals for a 1.0 mL system to UriSystem normals.

Sediment Constituents	1.0 mL System	UriSystem
Leukocytes	0-5/HPF	0-8/HPF
Erythrocytes	0-2/HPF	0-3/HPF
Hyaline Casts	0-1/HPF	0-2/HPF

These normal values are a guide only. Each laboratory should determine its own normal ranges based on patient population.

UriSystem Components		
14377252	UriSystem Tubes	500/case
14377253	UriSystem Tubes	1000/case
14377251	UriSystem Collection Pack*	500/case
14375204	UriSystem Stain	4x25 mL
14377206	UriSystem Rack	1/box
14375207	UriSystem Pipets	500/box
14377259	UriSystem DeciSlide (10 Test)	100/pk
14377250	UriSystem Starter Kit	500/case
14377254	UriSystem Caps (Blue)	500/case
14377255	UriSystem Caps (Neon Orange)	500/pk
14377258	UriSystem Caps (Optic Yellow)	500/pk
14377257	UriSystem Caps (Turquoise)	500/pk
14377256	UriSystem Caps (Violet)	500/pk
23-038-380	MAS UA Control, Level 1, Normal 6x15 mL	
23-038-384	MAS UA Control, Level 1, Normal 4x60 mL	
23-038-381	MAS UA Control, Level 2, Abnormal 6x15 mL	
23-038-385	MAS UA Control, Level 2, Abnormal 4x60 mL	
23-038-383	MAS UA Control, Bi-Level, 6x15 mL	

*Collection pack includes five bags, each containing 100 tubes, ID labels, caps, plastic collection cups, and tube carrying rack.