Urine Sediment Stain, 15 ml

Code:326U

Data Sheet

Microscopic examination of urine sediment is a valuable diagnostic tool in the evaluation of urinary tract disease. Due to the special refractile and varied nature of the formed substances in urine sediment, a specialized stain is required.

This urine sediment stain is a stabilized modification of the Sternheimer-Malbin urine stain. This modification allows easier recognition of leukocytes and so-called glitter cells (another form of leukocyte).

Directions for Use

1. The urine specimen should be a freshly voided sample collected in a clean and sealed container. Refrigerated specimens can also be used. A non-refrigerated delay of longer than 4 hours can result in new microbial growth.

2. Put in centrifuge tube and centrifuge for 5 minutes at about 1500 RPM.

3. Remove the supernatant without disturbing the sediment.

4. Add 1-2 drops of stain to the sediment in the tube.

5. Flick the bottom of the tube several times sharply with a finger.

6. Transfer one drop to a microslide. A cover slip should be used.

7. Low power: will see casts and various crystals. High power: not presence of RBC and WBC's per field.

Interpretations

See chart

Precautions

- For invitro diagnostic use only

- Harmful if swallowed

- Store at room temperature

Formulation

Crystal Violet 0.10%

Safranin 0.25%

Ethyl Alcohol 10.00 %

Water & Stabilizers 89.62%

Ammonium Oxalate 0.03%

Limitations

Microscopic examination of urinary sediment is a semi-quantitative procedure. In cases where exact count of leukocytes, bacteria, cast, etc., are required, techniques employing a hemocytometer are preferred.

Expected Values

Some erythrocytes, leukocytes and casts are excreted by normal individuals, but they are seen only occasionally in urinary sediments examined microscopically. Two to three red blood cells, 4-5 leukocytes per high powered field and occasional hyaline casts are accepted as normal.

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ELEMENTS IN URINARY SEDIMENT	UNUSUAL DISTINGUISHING COLOR OF STAINED ELEMENTS		COMMENTS
Red Blood Cells	Neutral - pink to purple Acid - pink (unstained) Alkaline - purple		
	Nucleii	Cytoplasm	
White Blood Cells Dark Staining Cells	purple	purple granules	
Glitter Cells (Sternheimer Malbin positive cells)	colorless or light blue	pale blue or grey	
Renal Tubular Epithelial Cells	dark shade of blue-purple	light shade of blue-purple	
Bladder Tubular Epithelial Cells	blue-purple	light purple	
Squamous Epithelial Cells	dark shade of orange-purple	light purple or blue	
	INCLUSIONS & MATRIX		
Hyaline Casts	pale pink or pale purple		Very uniform color. Slightly darker than mucous threads.
Coarse Granular Inclusion Casts	dark purple granules in purple matrix		
Finely Granular Inclusion Casts	fine dark purple granules in pale pink or pale purple matrix		
Waxy Casts	pale pink or pale purple		Darker than hyaline casts, but of a pale even color. Distinct broken ends.
Fat Inclusion Cast	fat globules unstained in a pink matrix		Rare. Presence is confirmed if examination under polarized light indicates double refraction.
Red Cell Inclusion Cast	pink to orange-red		Intact cells can be seen in matrix
Blood (Hemoglobin) Casts	orange-red		No intact cells
Bacteria	motile: don't stain non-motile: stain purple		Motile organisms are not impaired.
Trichomonas	light blue green		Motility is unimpaired in fresh specimens when recommended volumes of stain are used. Immotile organisms are also indentifiable.
Mucous	pale pink or pale blue		
Background	pale pink or pale purple		