



**VitroView™ Jones Stain Kit (Basement Membrane)**

**SKU#: VB-3026**

**Description:** The periodic acid oxidizes the carbohydrate components of the basement membrane which produce aldehydes. The released aldehydes reduce the silver to visible metallic silver. With this principle, Jones Stain Kit (Basement Membrane) is intended for use in histological demonstration of the basement membrane and reticular fibers. This kit is ideal for staining renal glomerular basement membranes. The basement membrane and reticular fibers are also found in skin, spleen and lung, etc.

**Kit Contents:**

VB-3026-1	Periodic acid solution-----	250ml×1
VB-3026-2	Methenamine Solution-----	250ml×2
VB-3016-3	Silver Nitrate Solution-----	30ml×1
VB-3026-4	Borax Solution-----	125ml×1
VB-3026-5	Gold Chloride Solution-----	125ml×1
VB-3026-6	Sodium Thiosulfate Solution-----	250 ml×1
VB-3026-7	Nuclear Fast Red Solution-----	250 ml×1

**Storage**

Store at 2-8°C

**Protocol**

**Thing to do before staining**

- Equilibrate all materials and prepared reagents to room temperature just prior to use and gently agitate.
- All glassware used in this procedure should be chemically cleaned and rinsed thoroughly in distilled water.
- Do not use metal forceps to remove slides from reagents. Use plastic forceps only.

**Jones Stain for paraffin sections:**

1. Deparaffinize in xylene I for 6 minutes and II for 6 minutes.
2. Rehydrate
  - a. Ethanol 100% (2 minutes)
  - b. Ethanol 100% (2 minutes)
  - c. Ethanol 95% (2 minutes)
  - d. Ethanol 95% (2 minutes)
  - e. Ethanol 70% (2 minutes)
3. Rinse in DI water (2 minutes).
4. Incubate slide in Periodic Acid Solution for 15 minutes.
5. Rinse in two changes of distilled water.
6. Combine the following for a working Silver Methenamine Solution:

Component	Volume
Methenamine Solution	42 ml
Silver Nitrate Solution	2.5 ml
Borax Solution	6 ml

Δ Note: Mixed solution may not be stored for reuse later.

7. Place working Silver Methenamine Solution in 50°C water bath and allow temperature to equilibrate for 2 min.
8. Incubate slide in working Silver Methenamine Solution in 50°C water bath for 15 min. Using plastic forceps dip slide in 'hot' distilled water and check under a microscope for evaluation of silver impregnation. Basement membrane and reticular fibers should be black. If color is not sufficient, dip slide in 'hot' distilled water and return the slide to working Silver Methenamine Solution for 5-10 minutes and check again.
9. Rinse in four changes of distilled water.
10. Incubate slide in Gold Chloride Solution for 15-30 seconds.
11. Rinse in four changes of distilled water.
12. Incubate slide in Sodium Thiosulfate Solution for 2 minutes.
13. Rinse in tap water followed by two changes of distilled water.
14. Incubate slide in Nuclear Fast Red Solution for 2 minutes.
15. Rinse slide quickly in distilled water.
16. Rinse slide using absolute alcohol.
17. Clear with 3 changes of xylene (5 minute per change)
18. Mount coverslip onto glass slide with Permount or some other suitable organic mounting medium.

**Jones Stain for frozen sections:**

1. Frozen section are fixed in acetone at -20 °C for 3 min or 80% Methanol at 4°C for 5 minutes
2. PBS 1× 10 minutes.
3. Rinse in DI water (2 minutes).
4. Follow step 3-12 above.

**Expected Results:**

- Basement Membrane-----Black
- Reticulum Fibers-----Black
- Nuclei-----Red
- Cytoplasm-----Light Pink

**Control Tissue:** Kidney cut at 2-4 microns, lung or spleen section.

**Note:** This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

**Precautions:** Handle with care. Avoid contact with eyes, skin and clothing. Do not ingest. Wear gloves.