



VitroView™ Martius Scarlet Blue (MSB) Stain Kit

SKU#: VB-3036

Description:

The Martius Scarlet Blue (MSB) technique proves to be a dependable approach for distinguishing between fresh and aged fibrin clusters. It achieves this differentiation by employing Martius Yellow, which selectively stains erythrocytes and early fibrin deposits. The staining process involves the utilization of dyes of varying molecular sizes: Crystal Scarlet, a medium-sized molecule dye, and larger molecule dyes like Phosphotungstic Acid and Aniline Blue. This trichrome-type staining results in red-colored fibrin and muscle tissues. On the other hand, collagen and older fibrin clusters take on a blue hue.

The Martius Scarlet Blue (MSB) staining method serves as a valuable tool for visualizing fibrin, particularly the older clusters. The associated stain kit is designed to facilitate the histological demonstration of fibrin, muscle, collagen, and erythrocytes.

Kit Contents:

VB-3036-1	Bouin's solution	250ml
VB-3036-2	Weigert's Hematoxylin Solution A	125 ml
VB-3036-3	Weigert's Hematoxylin Solution B	125 ml
VB-3036-4	Martius Yellow Solution	250ml
VB-3036-5	Brilliant Crystal Scarlet Solution	250ml
VB-3036-6	Phosphotungstic Acid Solution	250 ml
VB-3036-7	Aniline Blue Solution	250 ml
VB-3016-8	1% Acetic Acid Solution	250 ml

Storage

Room temperature.

Protocol

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 distilled water (5 minutes).
4. Mordant in Bouin's Solution, 60°C for 1 hour.
5. Wash in running tap water for 5 minutes to remove the picric acid.
6. Prepare Weigert's working hematoxylin: mix Weigert's Hematoxylin Solution A and B at 1:1 ratio.
7. Weigert's working hematoxylin for 10 minutes.
Note: Discard after use.
8. Blue in running tap water for 5 minutes, rinse once for 1 min in distilled water.
9. 95% Ethanol for 1 minute.
10. Apply Martius Yellow Solution for 2-3 minutes.
11. Rinse slides with distilled water

12. Brilliant Crystal Scarlet solution for 10 minutes. Rinse once for 1 min in distilled water.
13. Phosphotungstic acid solution for 10 minutes, discard solution.
14. Transfer directly into Aniline Blue Solution for 3 minutes.
15. Acetic Acid Solution for 2 seconds, discards solution.
16. Dehydrate with 2 dip of 95% Ethanol and 2 changes of 100% Ethanol (2 minutes per change).
17. Clear with 3 changes of xylene (5 minutes per change) and coverslip with Permount or other suitable organic mounting medium.

Control: Blood clot (thrombus) or lung.

Expected Result

- Nuclei - blue/black
- Muscles - dark red
- Fibrins - red (young clusters may be stained yellow, and older ones blue)
- Collagen - blue
- Erythrocytes - yellow

References:

Fitzgerald ST, et al (2019). Platelet-rich clots as identified by Martius Scarlet Blue staining are isodense on NCCT. J Neurointerv Surg. 11(11):1145-1149

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.