



SS1038-CM-VO

Picro-Sirius Red Stain Kit (For Cardiac Muscle)

Description: The Picro-Sirius Red Stain Kit (For Cardiac Muscle) is intended for use in the histological visualization of thin septa and collagen fibers. This modification of the Picro-Sirius Red stain eliminates the yellow cytoplasmic staining that can obscure thin collagenous septa. Using this procedure easily allows viewing of collagenous septa as thin as 0.2-0.5 microns. The PSR stain may be viewed using standard light microscopy or polarized light resulting in birefringence of the collagen fibers to distinguish between type I and type III.

Light Microscopy

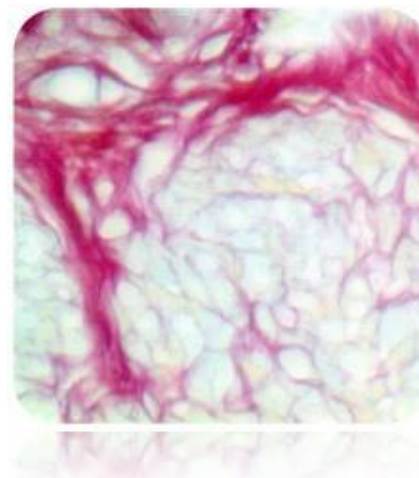
| | |
|------------|------------------------------|
| Collagen: | Red |
| Septa: | Red |
| Cytoplasm: | Colorless to Slightly Yellow |

Polarized Light Microscopy

| | |
|------------------------|-----------------------------|
| Type I (Thick fibers) | Yellow-Orange Birefringence |
| Type III (Thin fibers) | Green Birefringence |

Uses/Limitations: Not to be taken internally.
For In-Vitro Diagnostic use only.
Histological applications.
Do not use if reagents become cloudy.
Do not use past expiration date.
Use caution when handling reagents.
Non-Sterile.

Control Tissue: Cardiac Muscle
Uterus
Lung
Kidney



Availability/Contents:

| <u>Kit Contents</u> | <u>Volume</u> | <u>Storage</u> |
|--------------------------------------|---------------|----------------|
| Phosphomolybdic Acid Solution (0.2%) | 250 ml | 18-25°C |
| Picro-Sirius Red Solution | 250 ml | 18-25°C |
| Acetic Acid Solution (0.5%) | 250 ml | 18-25°C |

Precautions: Avoid contact with skin and eyes.
Harmful if swallowed.
Follow all Federal, State, and local regulations regarding disposal.
Use in chemical fume hood whenever possible.

Storage: 18° C  25° C

**SS1038-CM-VO****Procedure:**

1. Deparaffinize sections if necessary and hydrate to distilled water.
2. Apply adequate Phosphomolybdic Acid Solution (0.2%) to completely cover tissue section and incubate for 1-5 minutes.
3. Dip slide one time in distilled water.
4. Apply adequate Picro-Sirius Red Solution to completely cover tissue section and incubate for 60-90 minutes.
5. Rinse slide quickly in two changes of Acetic Acid Solution (0.5%).
6. Rinse slide using absolute alcohol.
7. Dehydrate in 2 changes of absolute alcohol, clear, and mount in synthetic resin.

References:

1. Puchtler H., Waldrop F.S., Valentine L.S. Polarization microscopic studies of connective tissue stained with picro-sirius red FBA. Beitr Path. 1973; 150, pages 174-187.
2. Junqueira L.C.U., Bignolas G., Brentani R.R. Picrosirius staining plus polarization microscopy, a specific method for collagen detection in tissue sections. Histochemistry J. 1979, 11, pages 447-455.
3. Dolber, P.C., Spach, M.S. Picrosirius red staining of cardiac muscle following phosphomolybdic acid treatment. Stain Technology, January 1987, Volume 62(1): pages 23-26.
4. Whittaker, P., Kloner, R.A., Boughner, D.R., Pickering, J.G. Quantitative assessment of myocardial collagen with picrosirius red and circularly polarized light. Basic Research in Cardiology. 1994, Volume 89, Number 5, pages 397-410. DOI: 10.1007/BF00788278
5. Whittaker P. Polarized light microscopy in biomedical research. Microscopy and Analysis 1995; 44, pages 15-17.

| Description: | Volume |
|--------------------------------------|---------|
| Phosphomolybdic Acid Solution (0.2%) | 250 ml |
| | 500 ml |
| | 1000 ml |
| Picro-Sirius Red Solution | 250 ml |
| | 500 ml |
| | 1000 ml |
| Acetic Acid Solution | 250 ml |
| | 500 ml |
| | 1000 ml |

Storage: 18° C  25° C