



# Movat Pentachrome Stain Kit

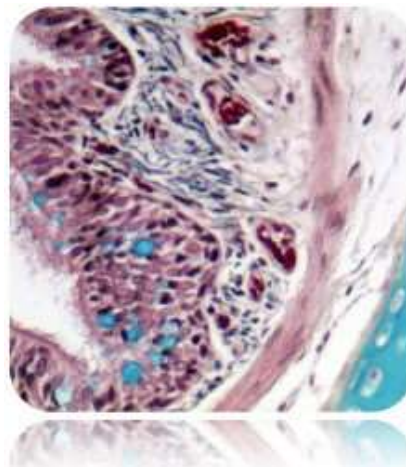
## (Modified Russell-Movat)

**Description:** The Movat Pentachrome Stain Kit (Modified Russel-Movat) is intended for use in histological demonstration of collagen, elastin, muscle, mucin and fibrin in tissue sections. This procedure is particularly useful when studying the heart, blood vessels and various vascular diseases.

Elastic Fibers:	Black to Blue/Black
Nuclei:	Blue/Black
Collagen:	Yellow
Reticular Fibers:	Yellow
Mucin:	Bright Blue
Fibrin:	Bright Red
Muscle:	Red

**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:** Lung, Skin, Colon, Heart  
or any vascular tissue.



### Kit Contents:

<u>Components</u>	<u>Volume</u>	<u>Storage</u>
Hematoxylin Solution (5%)	250ml	18-25°C
Ferric Chloride Solution (10%)	125 ml	18-25°C
Lugol's Iodine Solution	125 ml	18-25°C
Ferric Chloride (2%) Differentiating Solution	125 ml	18-25°C
Sodium Thiosulfate Solution (5%)	125 ml	18-25°C
Acetic Acid Solution (3%)	125 ml	18-25°C
Acetic Acid Solution (1%)	250 ml	18-25°C
Alcian Blue Solution, pH 2.5	125 ml	18-25°C
Biebrich Scarlet – Acid Fuchsin Solution	125 ml	18-25°C
Phosphotungstic Acid Solution (5%)	250 ml	18-25°C
Tartrazine Solution	125 ml	18-25°C

Storage: 18° C  25° C





**Precautions:** Keep away from open flame.  
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.

**Preparation of Reagents Prior to Beginning:**

1. Prepare working Elastic Stain Solution by mixing:  
(mixed solution may be used for 24 hours)


30ml Hematoxylin Solution (5%)
15ml Ferric Chloride Solution (10%)
15ml Lugol's Iodine Solution.
2. **Note:** Lugol's Iodine Solution will cause staining of all kit vials and labels over time. This does not adversely affect the performance of this product and is merely cosmetic in nature.
3. **Note:** Removal of mercury deposits is not required for tissues that have been fixed in mercury containing fixatives since it will be removed by the staining solution.

**Procedure (Standard):**

1. Deparaffinize sections if necessary and hydrate to distilled water.
2. Stain tissue section with working Elastic Stain Solution for 20 minutes.
3. Rinse in running tap water until no excess stain remains on slide.
4. Dip slide in Ferric Chloride (2%) Differentiating Solution 15-20 times and rinse in tap water.
5. Check slides microscopically for proper differentiation. Repeat step 4 if required.
6. Rinse in 2 changes of distilled water.
7. Place slide in Sodium Thiosulfate Solution (5%) and incubate for 1 minute.
8. Rinse in tap water for 2 minutes followed by 2 changes in distilled water.
9. Place slide in Acetic Acid Solution (3%) and incubate for 2 minutes to equilibrate tissue prior to staining with Alcian Blue Solution, pH 2.5.
10. Without rinsing, place slide in Alcian Blue Solution, pH 2.5 and incubate for 25 minutes.
11. Rinse in tap water for 2 minutes followed by 2 changes in distilled water.
12. Place slide in Biebrich Scarlet – Acid Fuchsin Solution and incubate for 3 minutes.
13. Rinse slide in 2 changes of distilled water.
14. Place slide in Acetic Acid Solution (1%) for 5-10 seconds with agitation.
15. Rinse quickly in distilled water.
16. Differentiate slide in 2 changes of Phosphotungstic Acid Solution (5%) for 3 minutes each.
17. Check slides microscopically for proper differentiation. Collagen should be clear but elastic fibers should still be stained. Repeat step 15 if required.
18. Rinse slide briefly in distilled water.
19. Dip slide several times (3-5) in Acetic Acid Solution (1%).
20. Shake off excess Acetic Acid Solution (1%) and without rinsing apply Tartrazine Solution and incubate for 2 minutes.
21. Rinse slide in 3 changes of absolute alcohol.
22. Clear, and mount in synthetic resin.

**References:**

1. Movat, H.Z. Demonstration of all connective tissue elements in a single section, Arch Pathology, 1955 Volume 60, page 289.

Storage: 18° C  25° C



**SS1037-VO**

Description:	Volume
Hematoxylin Solution (5%)	250 ml
	500 ml
	1000 ml
Ferric Chloride Solution (10%)	125 ml
	500 ml
	1000 ml
Lugol's Iodine Solution	125 ml
	500 ml
	1000 ml
Ferric Chloride (2%) Differentiating Solution	125 ml
	500 ml
	1000 ml
Sodium Thiosulfate Solution (5%)	125 ml
	500 ml
	1000 ml
Acetic Acid Solution (3%)	125 ml
	500 ml
	1000 ml
Acetic Acid Solution (1%)	125 ml
	250 ml
	500 ml
	1000 ml
Alcian Blue Solution, pH 2.5	125 ml
	250 ml
	500 ml
	1000 ml
Biebrich Scarlet – Acid Fuchsin solution	125 ml
	500 ml
	1000 ml
Phosphotungstic Acid Solution (5%)	250 ml
	500 ml
	1000 ml
Tartrazine Solution	125 ml
	500 ml
	1000 ml

Storage: 18° C  25° C