

## Ordering Information

Product Name	50 Tests - i6000/manual	50 Tests - Xmatrix
Acid-Fast Bacteria (AFB) Blue Stain	N/A	SS025-50X
Acid-Fast Bacteria (AFB) Green Stain	N/A	SS059-50X
Alcian Blue/PAS Stain	SS020	SS026-50X
Alcian Blue pH 2.5 Stain	SS012	SS027-50X
Alizarin Red Stain (manual use only)	SS052-50K	N/A
Amyloid (Congo Red) Stain	SS003	SS028-50X
Azure A Stain	SS038	SS038-50X
Colloidal Iron Stain	SS054	SS054-50X
Elastic Stain	N/A	SS029-50X
Giemsa Stain	SS016	SS049-50X
Gomori's Trichrome Blue Stain	SS033	SS033-50X
Gomori's Trichrome Green Stain	SS034	SS034-50X
Gram Stain	SS015	SS037-50X
Grocott's Methenamine Silver (GMS) Stain	SS017	SS042-50X
Iron Stain	SS010	SS030-50X
Jones' Basement Membrane Stain	N/A	SS058-50X
Masson's Trichrome Stain	SS008	SS035-50X
Mucicarmine Stain	SS006	SS036-50X
Oil Red O Stain	SS021	SS043-50X
Periodic Acid-Schiff (PAS) Diastase Stain	SS001	SS039-50X
Periodic Acid-Schiff (PAS) for Fungi Stain	SS022	SS053-50X
Periodic Acid-Schiff (PAS) Stain (without Diastase)	SS002	SS032-50X
Renal Masson's Trichrome Stain	SS050	SS050-50X
Reticulin/No Counterstain	SS046	SS046-50X
Reticulin/Nuclear Fast Red Stain	SS011	SS047-50X
Safranin O Stain	SS040	SS040-50X
Sudan Black B Stain	SS019	SS041-50X
Toluidine Blue Stain	SS057	SS057-50X
Van Gieson Stain	SS044	SS044-50X
von Kossa Stain (manual use only)	SS045-50K	N/A

\* IVD Products: Unless specified otherwise, all Special Stains listed in this section are for In Vitro Diagnostics Use.



### Xmatrix<sup>®</sup> ELITE

Xmatrix<sup>®</sup> ELITE assures accurate reagent dispensing using liquid level sensor, even distribution of reagents on the specimen and up to 90% reduced reagent consumption via coverslip micro-chamber, precise temperature control on each slide by eXACT™ and eliminates cross contamination through the use of disposable pipette tips.

Xmatrix<sup>®</sup> ELITE maximizes the testing capacity, minimizes hands-on time, reduces errors and produces consistent and accurate results. This under-scores our commitment to provide a system to meet the needs of molecular pathology laboratory of today, tomorrow, and beyond...

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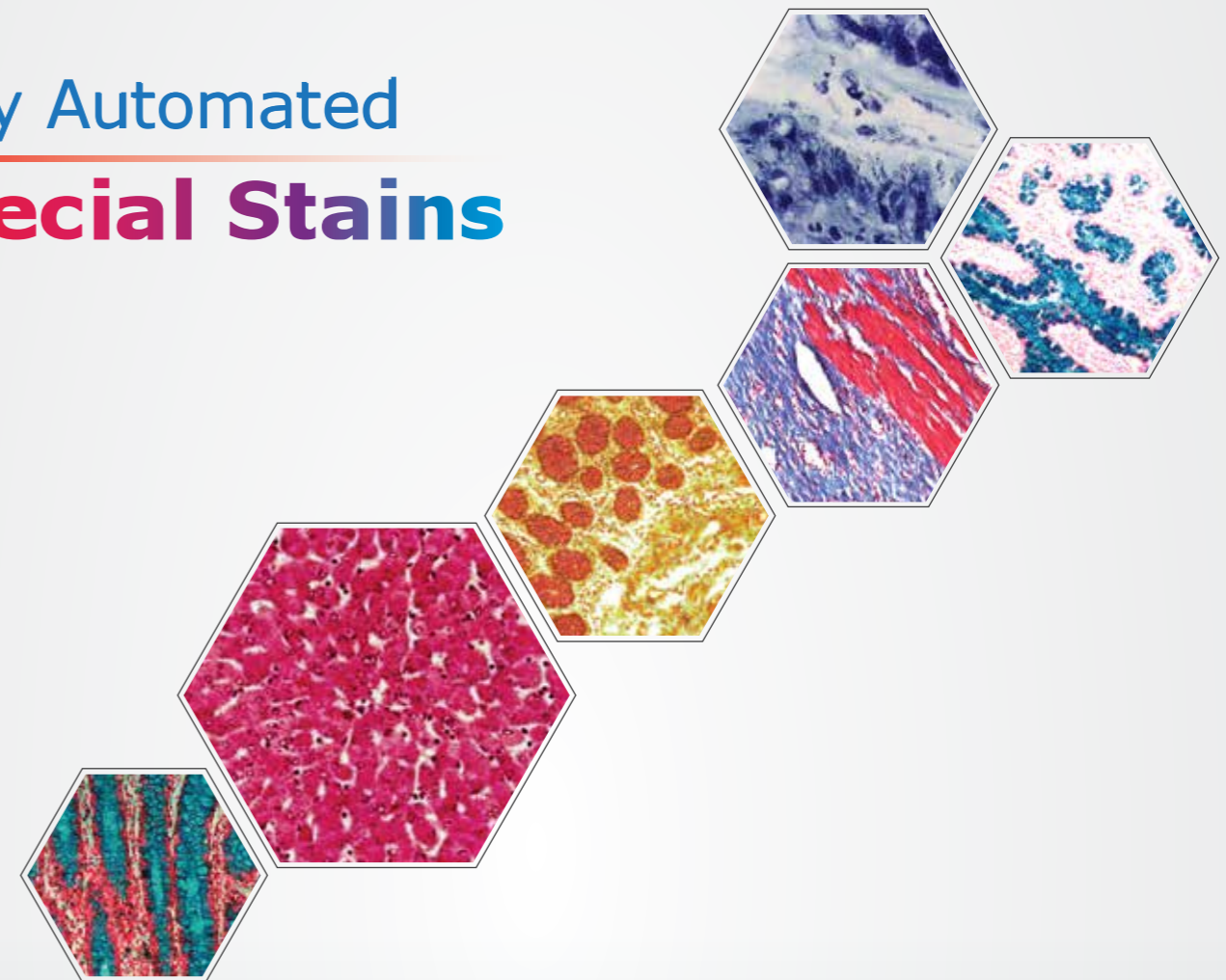


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**NEW**

## Fully Automated Special Stains



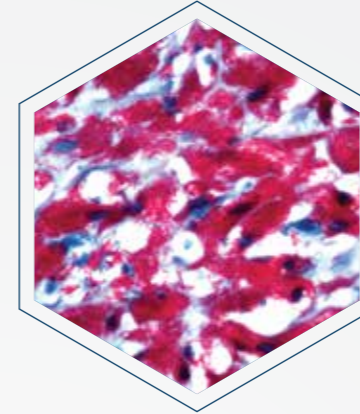
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30 Stains  
GMS, Trichrome  
Reticulin, and more

**Xmatrix<sup>®</sup> ELITE**

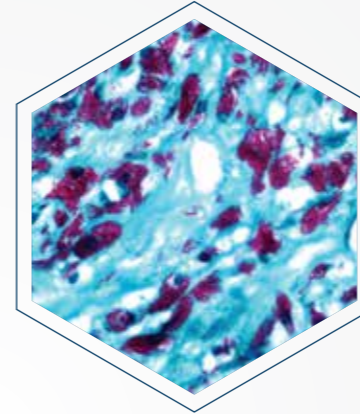
**BioGenex**  
Accelerating the pace of precision medicine



### Acid-Fast Bacteria (AFB) Blue Stain

Acid-fast stain is used for demonstration of *Mycobacterium tuberculosis* in tissue sections and smears. Acid-fast bacilli (Mycobacteria) stain red while background & non Acid-fast bacteria stain blue.

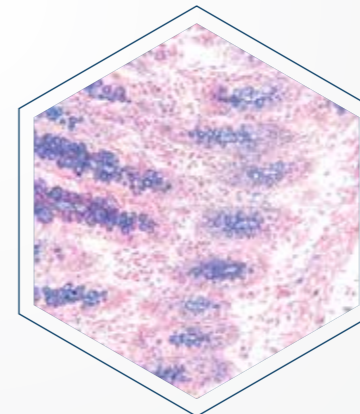
Catalog No.	: SS025 (Xmatrix)
Acid-fast bacilli	: Red
Non Acid-fast bacteria	: Blue
Positive Control	: AFB infected tissue & Smears



### Acid-Fast Bacteria (AFB) Green Stain

Acid-fast stain is used for demonstration of *Mycobacterium tuberculosis* in tissue sections and smears. Acid-fast bacilli (Mycobacteria) stain red while background & non Acid-fast bacteria stain green.

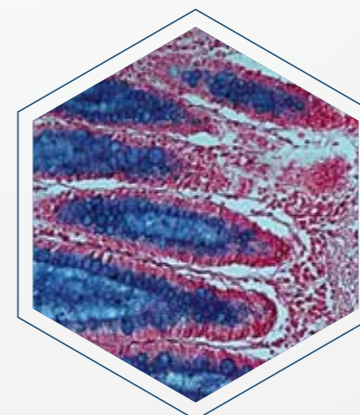
Catalog No.	: SS059-50X (Xmatrix)
Acid-fast bacilli	: Red
Non Acid-fast bacteria	: Green
Positive Control	: Mycobacterium infected tissues



### Alcian Blue /PAS Stain

Alcian Blue/PAS stain utilizes the properties of both, the PAS and Alcian Blue methods. Acidic mucosubstances are stained with the Alcian Blue technique and neutral mucosubstances are stained by the PAS stain.

Catalog No.	: SS026-50X (Xmatrix), SS020 (i6000)
Acidic mucins	: Blue
Neutral mucins	: Magenta
Mixtures of above	: Blue/Purple
Nuclei	: Deep blue
Positive Control	: Intestine



### Alcian Blue pH 2.5 Stain

Alcian Blue pH 2.5 stains both sulfated and carboxylated acid mucopolysaccharides as well as sulfated and carboxylated sialomucins (glycoproteins) to blue color. Nuclear fast red counter stains the nuclei in red color.

Catalog No.	: SS027-50X (Xmatrix), SS012 (i6000)
Acidic sulfated mucosubstances	: Blue
Nuclei	: Pink to Red
Cytoplasm	: Pale Pink
Positive Controls	: Small Intestine, Appendix, or Colon

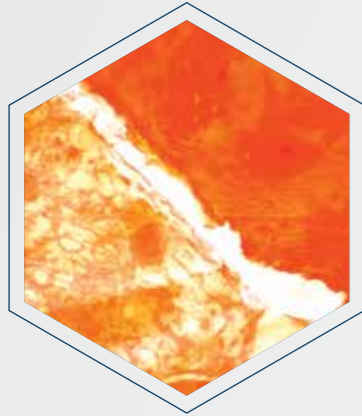
### Three Simple Steps:



### Key Features:

- Fully Automated – baking through final coverslip
- High capacity & high-throughput system
- Fast turnaround
- Over 30 factory optimized SS protocols
- Crisp, intense, reliable and reproducible stains
- Ability to optimize protocols for customized intensity
- Eco-friendly - up to 75% reduced
  - Reagent consumption
  - Waste generation
- Easy inventory management with barcode driven system
- Reports for inventory management and regulatory compliance

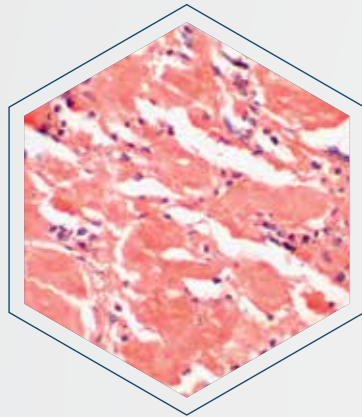




**Alizarin Red Stain**

Alizarin Red S is an anthraquinone derivative and is used to identify calcium in tissue sections. The reaction is not strictly specific for calcium. Magnesium, manganese, barium, strontium, and iron may interfere, but these elements usually do not occur in sufficient concentration to interfere with the staining.

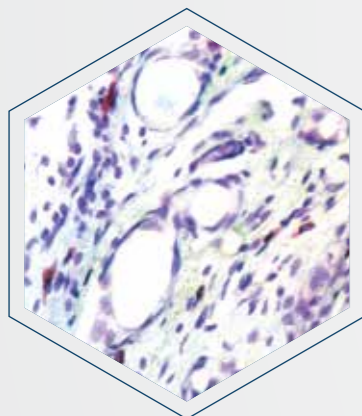
Catalog No.	: SS052-50X (manual use only)
Calcium deposit	: Orange-Red
Positive Controls	: Calcium containing tissue



**Amyloid (Congo Red) Stain**

Amyloid is an abnormal, fibril-like protein that deposits extracellularly in various organs and tissue of individuals with amyloidosis. As amyloid continues to be deposited in the tissues. Amyloid may be detected in tissue sections using the Amyloid Congo Red stain.

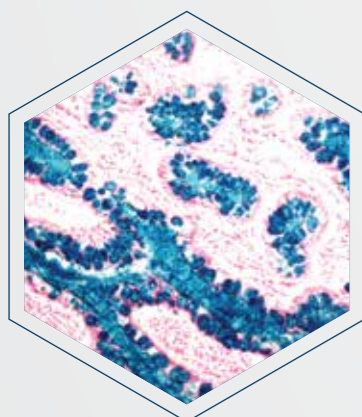
Catalog No.	: SS028-50X (Xmatrx) SS003 (i6000)
Nuclei	: Blue
Elastic Fibers:	: Light pink
Positive Controls	: Kidney, Lung, and Heart



**Toluidine Blue Stain**

Mast cells normally present in the connective tissue of all organs are increased in many pathological conditions. Mast cell granules which are refractile and not readily identified in H&E stained sections are well demonstrated by Azure A method.

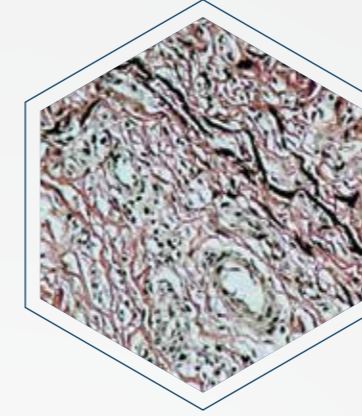
Catalog No.	: SS038-50X (Xmatrx), SS038 (i6000)
Mast cell granules	: Purple
Nuclei	: Blue
Background	: Pale blue
Positive Controls	: Skin



**Colloidal Iron Stain**

Colloidal Iron stain is used to identify carboxylated, sulfated mucopolysaccharides and glycoprotein mucins which at low pH absorb colloidal ferric ions present in the tissues. The Prussian blue reaction demonstrates iron bound to the tissue.

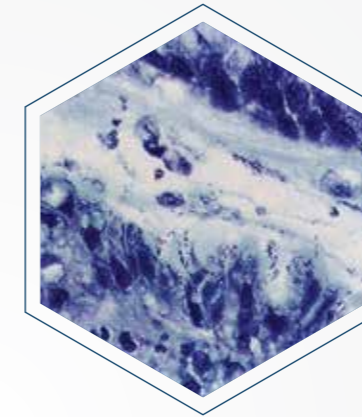
Catalog No.	: SS054-50X (Xmatrx), SS054 (i6000)
Acid mucins	: Deep blue
Nuclei	: Pink-Red
Cytoplasm	: Pink
Positive Control	: Small Intestine Tissue



**Elastic Stain**

Elastic staining procedure can demonstrate elastic fibers which stain dark blue to black, whereas nuclei, collagen, and other tissue elements stain blue, red and yellow, respectively.

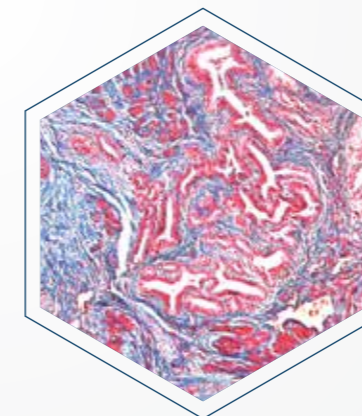
Catalog No.	: SS029-50X (Xmatrx)
Elastic fibers	: Blue-Black to Black
Nuclei	: Blue to Black
Collagen	: Red
Other tissue elements	: Yellow
Positive Controls	: Skin



**Giemsa Stain**

Giemsa staining is useful for detecting Helicobacter pylori, the causative agent of most stomach and duodenal ulcers.

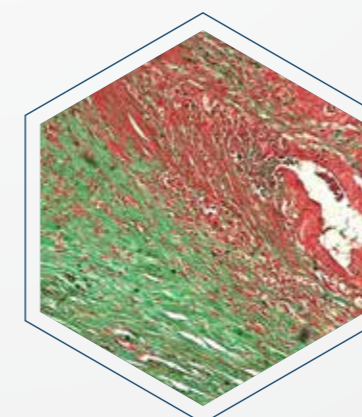
Catalog No.	: SS049-50X (Xmatrx), SS016 (i6000)
Helicobacter pylori & Nuclei stain	: Dark blue
Cytoplasm	: Pink
Positive Controls	: Helicobacter pylori in tissue sections



**Gomori's Trichrome Blue Stain**

Gomori's trichrome stain is useful in the study of diseases of connective tissue and muscles characterized by fibrotic and dystrophic changes, and to differentiate between collagen and smooth muscles.

Catalog No.	: SS033-50X (Xmatrx), SS033 (i6000)
Muscle fibres	: Red
Collagen	: Blue
Nuclei	: Blue Black
Positive Controls	: Uterus, Striated Muscle, Small Intestine or any other Connective tissue

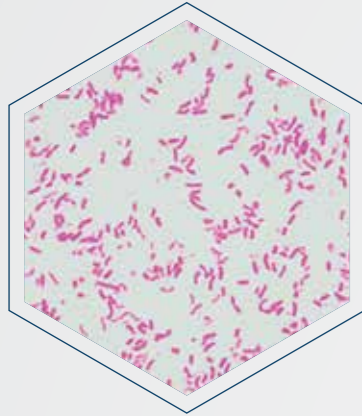


**Gomori's Trichrome Green Stain**

Gomori's trichrome stain is useful in the study of diseases of connective tissue and muscle characterized by fibrotic and dystrophic changes, and to differentiate between collagen and smooth muscles.

Catalog No.	: SS034-50X (Xmatrx), SS034 (i6000)
Muscle fibres	: Red
Collagen	: Green
Nuclei	: Blue black
Positive Controls	: Uterus, Striated Muscle, Small Intestine or any other Connective tissue

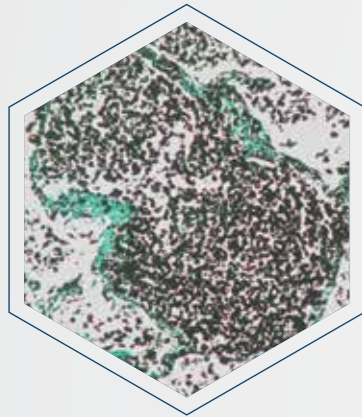




**Gram Stain:**

The Gram Stain procedure continues to be one of the initial screening tests for detecting bacteria in wounds, sputum, pus, tissues, etc.

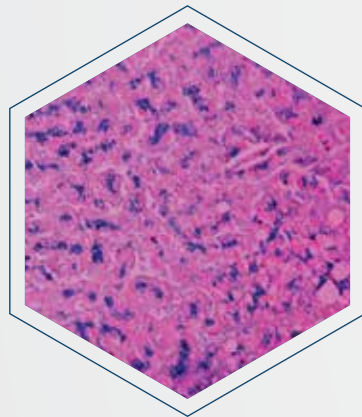
Catalog No.	: SS037-50X (Xmatrx), SS015 (i6000)
Gram-Positive	: Deep blue
Gram Negative	: Pink to red



**Grocott's Methenamine Silver (GMS) Stain**

GMS staining is specific for demonstrating fungi in tissue sections. Fungi stain grey to black with a light green background.

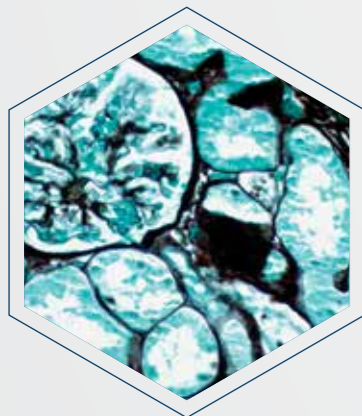
Catalog No.	: SS042-50X (Xmatrx), SS017 (i6000)
Fungi, <i>P. carinii</i> , Histoplasma spp	: Black
Mucin	: Dark grey
Background	: Pale green
Positive Controls	: Fungi in tissue sections



**Iron Stain**

In Iron staining method ferric iron, loosely bound in protein complexes, reacts with acidic potassium ferrocyanide producing a blue color.

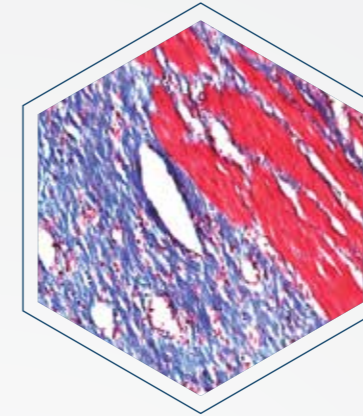
Catalog No.	: SS030-50X (Xmatrx), SS010 (i6000)
Iron (ferric form)	: Bright blue
Nuclei	: Red
Cytoplasm	: Pink
Positive Controls	: Liver & Spleen



**Jones' Basement Membrane Stain**

Jones' Basement Membrane stain kit is used to identify basement membranes, specifically glomerular and tubular membranes in renal tissue.

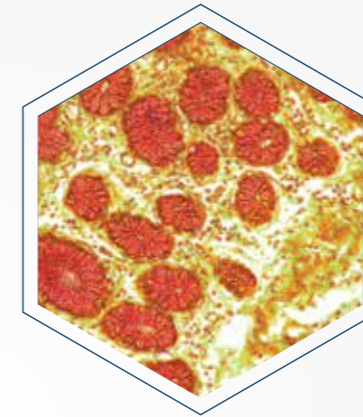
Catalog No.	: SS058-50X (Xmatrx)
Basement membrane	: Black
Nuclei	: Red
Background	: Pink
Positive Controls	: Kidney tissue



**Masson's Trichrome Stain**

Masson's Trichrome, a mixture of three stains, is useful in the study of diseases of connective tissue and muscle characterized by fibrotic and dystrophic changes. It also differentiates between collagen and smooth muscles.

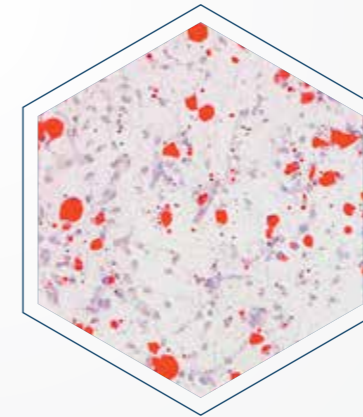
Catalog No.	: SS035-50X (Xmatrx), SS008 (i6000)
Collagen	: Blue
Nuclei	: Black
Muscle, Cytoplasm, Keratin	: Red
Positive Controls	: Skin, Lung, Stomach & Intestine



**Mucicarmine Stain**

Mucicarmine preferentially stains mucin and is used to identify primary tumor sites, distinguishing mucin-negative undifferentiated squamous cell lesions from mucinpositive adenocarcinomas.

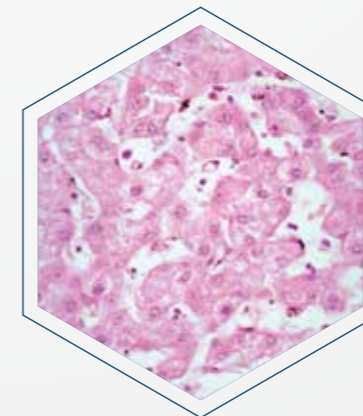
Catalog No.	: SS036-50X (Xmatrx), SS006 (i6000)
Mucins	: Deep Rose
Nuclei	: Black
Other Tissue elements	: Yellow
Positive Controls	: Colon



**Oil Red O Stain**

Oil Red O stain is an oil-soluble dye used to evaluate normal or abnormal fatty tissue. Abnormal deposits of fatty emboli may develop after a bone fracture or an injury that crushes fatty tissue.

Catalog No.	: SS043-50X (Xmatrx), SS021 (i6000)
Basement membrane	: Black
Fat	: Red
Nuclei	: Blue

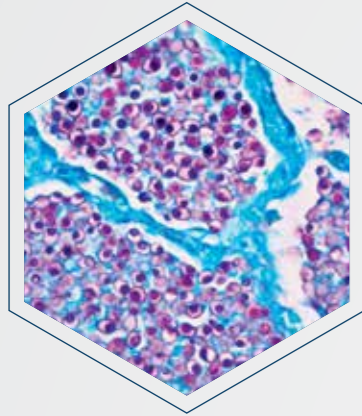


**Periodic Acid-Schiff (PAS) Diastase Stain**

PAS is a stain that typically gives a magenta color in the presence of glycogen. Diastase is an enzyme that breaks down glycogen into smaller sugar units, maltose and glucose that are washed out of the section.

Catalog No.	: SS039-50X (Xmatrx), SS001 (i6000)
Nuclei	: Blue
Glycogen and other carbohydrates	: Red to pink
Positive Controls	: Liver tissue

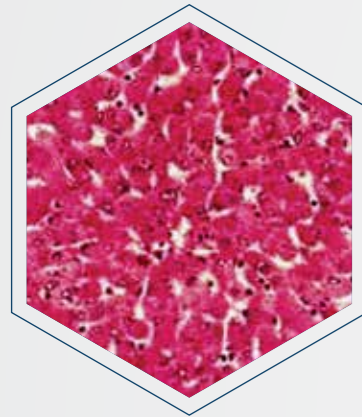




**Periodic Acid-Schiff (PAS) for Fungi Stain**

PAS for fungi is a staining method used to identify fungi in formalin-fixed and paraffin-embedded tissues or autopsy tissues. Polysaccharides present in fungal cell walls are oxidized by the periodic acid to aldehydes.

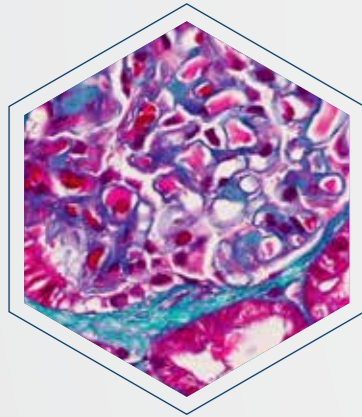
Catalog No.	: SS053-50X (Xmatrx), SS022 (i6000)
Fungi	: Rose
Background	: Green to blue



**Periodic Acid-Schiff (PAS) Stain**

PAS staining is mainly used for staining structures containing a high proportion of carbohydrate macromolecules such as glycogen, glycoprotein, & proteoglycans typically found in connective tissues, mucus, glycocalyx, and basal laminae.

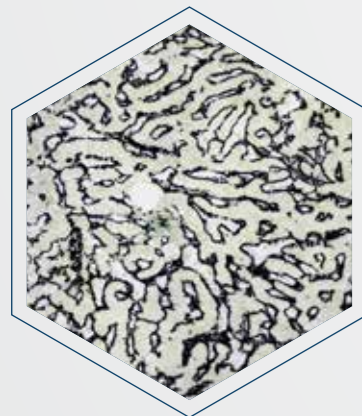
Catalog No.	: SS032-50X (Xmatrx), SS002 (i6000)
Glycogen & Mucin	: Red/Purple
Background	: Blue
Positive Controls	: Liver, Cardiac, and Skeletal Muscle



**Renal Masson's Trichrome Stain**

The term "trichrome" refers to a mix of three stains. These dyes often stain nucleus, collagen and cytoplasm structures in mordants such as phosphotungstic or phosphomolybdic acid.

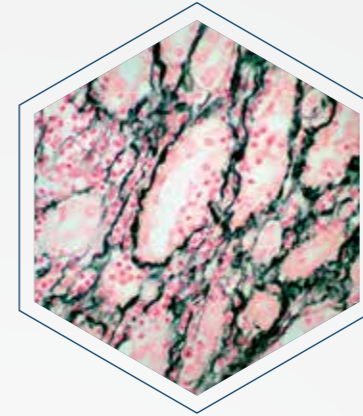
Catalog No.	: SS050-50X (Xmatrx), SS050 (i6000)
Fibrinoid and immune deposits	: Red
Basement membrane & collagen	: Green
Nuclei	: Blue
Positive Controls	: Intestine tissue



**Reticulin/No Counterstain Stain**

Reticulin staining is used to visualize reticular fiber and used extensively in liver. Reticulin staining may be used for the differential diagnosis of tumors such as carcinomas, sarcomas and lymphomas.

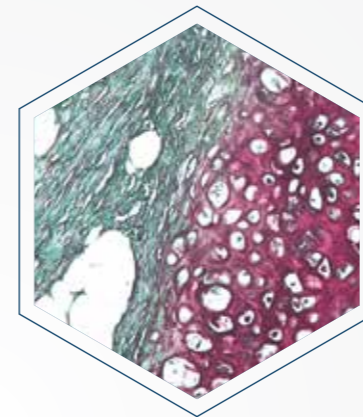
Catalog No.	: SS046-50X (Xmatrx), SS046 (i6000)
Reticulin fibers	: Black
Nuclei	: Black
Positive Controls	: Liver & Spleen



**Reticulin/Nuclear Fast Red Stain**

Ammonical silver stains are common methods for demonstration of reticular fibers.

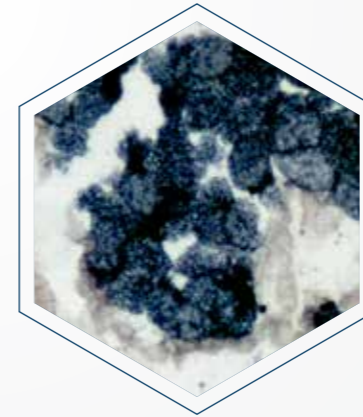
Catalog No.	: SS047-50X (Xmatrx), SS011 (i6000)
Reticulin	: Black
Background	: Pink to rose
Positive Controls	: Kidney and Liver tissue



**Safranin O Stain**

Safranin O staining method is used for the detection of cartilage, mucin and mast cell granules on FFPE and frozen sections. The cartilage and mucin will be stained orange to red, and the nuclei will be stained black.

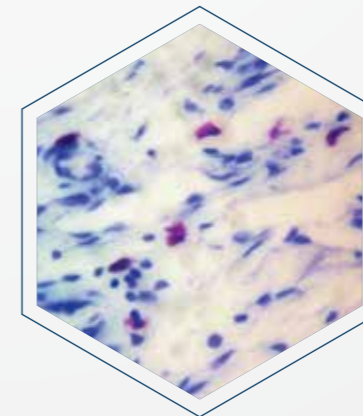
Catalog No.	: SS040-50X (Xmatrx), SS040 (i6000)
Nuclei	: Black
Cytoplasm	: Grey Green
Cartilage, Mucin & Mast cell granules	: Orange to Red
Positive Controls	: Cartilage



**Sudan Black B Stain**

Sudan Black B is a classical dye used for studying lipids in tissue sections. Sudan black B stain is used to differentiate fat cell tumors (liposarcomas) from other types of tumors

Catalog No.	: SS041-50X (Xmatrx), SS019 (i6000)
Fat	: Blue-black
Nuclei	: Red

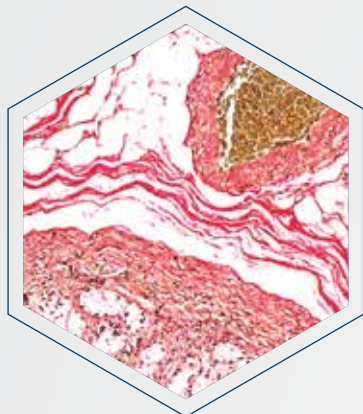


**Toluidine Blue Stain**

Mast cells normally present in the connective tissue of all organs are increased in many pathological conditions. Mast cell granules which are refractile and not readily identified in H&E stained sections are well demonstrated by Toluidine blue staining method.

Catalog No.	: SS057-50X (Xmatrx), SS057 (i6000)
Mast cell granules sulphated & carboxylated mucins	: Purple
Nuclei	: Blue
Background	: Pale Blue
Positive Control	: Skin

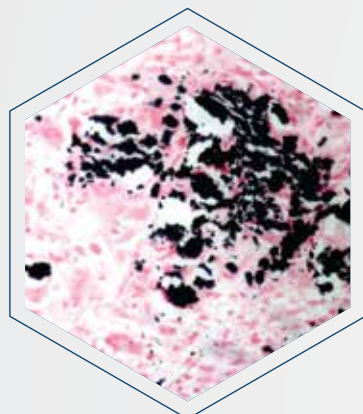
# Xmatrix® ELITE - Fully Automated High Throughput Special Stains System



## Van Gieson Stain

Van Gieson Stain is used to differentiate between collagen and smooth muscles in tumors and to demonstrate the increase of collagen in diseases.

Catalog No.	: SS044-50X (Xmatrix), SS044 (i6000)
Collagen	: Bright red
Nuclei	: Blue black
Cytoplasm, Muscle, Fibrin & RBC's	: Yellow
Positive Controls	: Stomach



## von Kossa Stain

Abnormal deposits of calcium may be found in any area of the body. von Kossa staining is used to demonstrate deposits of calcium.

Catalog No.	: SS045-50K (manual use only)
Nuclei	: Red
Cytoplasm	: Pink
Calcium salts	: Black or brown black
Positive Controls	: Tissue containing known positive calcium deposits or undecalcified bone