Histology Product Guide

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Histology Product Guide

Polysciences, Inc. Polysciences, Inc. manufactures specialty chemicals and reagents for histology, light microscopy and anatomic pathology as well as other clinical, research and life sciences applications.

Our full product catalog contains over 3000 unique and specialty products used by histology professionals, lab technicians, pathologists, chemists and scientists, including; embedding media, special stain kits, tissue marking dyes, mounting media, fixatives, certified and fluorescent dyes & stains, IHC and In Situ products. Product quality at Polysciences, Inc. is complemented by strong technical and customer support to answer questions quickly and accurately. We strive to provide advanced technology, manufacturing competence and technical support to help our customers meet their goals.

We offer a complete line of Life Sciences products, to learn more please visit: polysciences.com/LifeSciences

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Fixation

Acetic Acid Formalin for Bone Marrow & Lymph Node Fixative
Designed to fix lymphoreticular myeloid, lymph nodes and bone marrow tissues. Mercury free.

Cat. #: 24910  Size: 500ml, 1L

Acrolein, distilled, 99% - EM grade
Used as a fixative in preparation of dense biological specimens for electron microscopy, in combination with other aldehydes such as formaldehyde or glutaraldehyde. Distilled and packaged in serum vials for easy handling.

Cat. #: 00016  Size: 5x10ml

Bouin’s Fixative (Bouin’s Fluid)
Picric acid, formalin and acetic acid fixative. Excellent for use in preserving soft and delicate tissue structures. Shrinking induced by the picric acid is offset by the swelling of the glacial acetic acid.

Cat. #: 16045  Size: 1L, 1 gal

Eco-Fix Derm
(Formalin Free Tissue Fixative without Alcohol for Dermatology Specimens)
Much better characteristics than those of formaldehyde-based fixatives, yielding consistent results even after long-term fixation. Carbohydrates, proteins, antigenic sites and nucleic acids are all effectively preserved. Tissues fixed with Eco-Fix Derm Fixative have a similar appearance to those fixed in formalin-based fixatives and also show more sensitive staining results.

Cat. #: 25060  Size: 4L

Eco-Fix Tissue Fixative
Eco-friendly alternative that replaces common fixatives containing formalin-based, alcohol-based or mercury-based ingredients. Additionally, it can also be used in sequence with other fixatives. The versatility of Eco-Fix Tissue Fixative makes it optimal for use in histopathology, cytology, histochemistry, immunohistochemistry and molecular pathology. Preserves tissue integrity and eliminates the need for marker recovery procedures.

Cat. #: 25059  Size: 1 gal

Fast Fix
Rapid fixation-method for frozen sections. Frozen sections are often preformed under extreme pressure and timed according to CAP regulations, therefore it is in the interest of patient care to get the best stained section to the pathologist as quickly as possible. Safe for all tissue types.

Cat. #: 24607  Size: 100ml, 500ml

Flow Fix Paraformaldehyde Fixative, 1% and 2%
Sodium azide free buffer comprised of a neutral pH-buffered saline that contains paraformaldehyde.

Cat. #: 25037  Size: 1 kit (1% w/v)
25085  1 kit (2% w/v)

Formaldehyde, 10%, methanol free, Ultra Pure
Suitable for both electron and light microscopy. Easily penetrates large specimen. Fast penetration but slow crosslinking When used in combination with glutaraldehyde, it fixes delicate tissues such as brain in vascular perfusion.

Cat. #: 04018  Size: 1L, 4x1L

Formalin, 10% neutral buffered (phosphate buffer)
Most commonly used fixative in histology laboratories. Used for routine histological staining; can be used for immunohistochemistry.

Cat. #: 08379  Size: 3.75L, 20L

Glutaraldehyde
Polysciences was the first to develop a superior grade of glutaraldehyde. Each batch of vacuum distilled glutaraldehyde is analyzed to maintain consistent high quality and freedom from contaminants. Each ampoule is fitted with an ampoule cracker for added safety.

Cat. #: 00377  Size: 500ml, 1L, 4x1L

Hartmann’s Fixative
(Modified Davidson’s Fixative)
Recommended fixative to use for testes and eyes to achieve better morphology compared to formalin. Overnight fixation for the visualization of lymph nodes in radical dissection specimens. Helpful with both breast and colon specimens by turning lymph nodes white.

Cat. #: 24355  Size: 500ml, 1 gal

Hollandes Fixative
Excellent for large and small gastric tissue, GI biopsies or any tissues that contain large amounts of inflammatory and mucinous cells. Hollandes’ solution is a preferred fixative for flagellates and ciliates demonstrated with silver stains. Useful for routine surgical specimens.

Cat. #: 24354  Size: 500ml, 1 gal

HOPE® Fixative Starter Kit
The HOPE® fixation technique is mainly used for the preparation of paraffin embedded tissue sections. In contrast to other fixation methods HOPE® does not completely denature or cross-link structural proteins, enzymes and nucleic acids. Tissue specimens fixed with the HOPE® technique allow for greater morphology and retrospective studies on the molecular level.

Cat. #: 24884  Size: 1 kit
Karnovsky’s Fixative
A Formaldehyde/Glutaraldehyde fixative commonly used in EM for good structural preservation. Pre-measured in ampoules for 1-step preparation. Kit Contains: 1x10ml 50% Glutaraldehyde, 2x10ml 16% Formaldehyde, 50ml 0.2M Phosphate Buffer.

Methanol Fixative for Hematology
For use as a fixative prior to staining bloody specimen material or blood culture supernatant fluid. Methanol preserves the morphology of red blood cells as well as bacteria and parasites.

Methanol (Methyl alcohol), 99.5% - EM Grade
Dehydrating agent of tissue as a preparation for embedment.

Poly/LEM Fixative
Light and Electron Microscopy fixative. Popular methanol-free fixative is a formaldehyde-based material formulated to eliminate the need to select a fixative based on the type of microscopy to be employed.

Zinc Formalin Fixative, pH 6.25
Excellent morphological preservation of nuclear & cytoplasmic components. Can replace neutral buffered formalin for routine tissue and immunohistochemical procedures. Recommended for immunohistochemistry as it reduces cross-linking.

Transport Buffers
Michel’s Transport Buffer
Holding medium/transport buffer for tissue transport. Specimens can be held at room temperature for five days in transport medium before processing.

PolyTransport Buffer
Preserve specimens from surgery to the point of grossing for fixation prior to further processing. Specially formulated transport medium designed to preserve tissue in a viable state during transport by maintaining osmolarity and pH for 24-48 hours. No washing of specimens necessary prior to placing in fixative or rapid freezing. Prevents bacterial growth and denaturing or cross-linking of proteins.

Poly-NoCal
Specially formulated solution of high purity hydrochloric acid and EDTA. Designed for rapid decalcification of fixed tissue sections. Formulation also includes buffers to help prevent cellular swelling or distortion.

Poly-NoCal & Fixative
Formic acid and formaldehyde based solution designed to fix and decalcify in one easy, convenient step. Small histological specimens, such as bone marrow, will achieve softening sufficient for sectioning in four hours.

Poly-NoCal End Point Determination Kit
Avoid over and under decalcification problems. Control of decalcification is an important part of tissue morphology. Kit includes all the necessary materials you need to determine endpoint decalcification accurately, consistently and conveniently. Each kit typically performs ~200 tests.

Super Decalcifier I: Delicate
Save Time - Decalify in as little as 3 hours! Ready-to-Use for human and animal tissue. Recommended for IHC, special stains and routine stains for mildly calcified specimens such as bone marrow biopsies.

Super Decalcifier II: Heavy Duty
Designed for safe, longer term decalcification of hard compact bone, femoral heads, above and below the knee amputations. Extremely effective and versatile decalifier.
Alcohol Reagent, 100%, Histology Grade

Suitable for most histological procedures. Our histology grade alcohol reagent is composed of 90 parts ethyl alcohol, 5 parts methyl alcohol and 5 parts isopropyl alcohol, v/v blend. Preferred mixture for dehydrating tissue samples.

Cat. #: 09860  Size: 1 gal

ParaClear Odorless - Xylene Substitute

ParaClear is an odorless xylene substitute. It will remove alcohol during the final steps of routine tissue processing and is miscible with paraffin for infiltration. It has a higher flash point than xylene, reducing the flammability danger to the laboratory.

Cat. #: 22463  Size: 3.8L, 4x3.8L

Poly/Clear Solvent Xylene Substitute

A pleasant citrus odor replaces xylene odor when you switch to Poly/Clear Solvent in your laboratory as your paraffin clearing agent. This low-toxicity material is for use in histology and cytology procedures whenever xylene is used. The high flash point and biodegradability of this product makes it an attractive alternative.

Cat. #: 25112  Size: 1 kit

Xylene, Histology Grade

Routine clearing agent used in histology. Also, compatible with Canada balsam in oil-immersion microscopy.

Cat. #: 08389  Size: 1 gal

Mohs Lab Reagent Starter Kit

All reagents needed to start a complete MOH's lab. From grossing and embedding to staining slides that can be viewed within minutes. Kit Contains: PolyFreeze Frozen Mounting Medium, Tissue Marking Dye, Fast Frozen Stain Kit, Flash Dip FNA/ H. Pylori Kit, Microscope Slides and Delicate Melanin Bleach Kit.

Cat. #: 25044  Size: 1 kit

Embedding - Frozen

Peel-A-Way® Molds

Easy to use and saves time. This unique design will neatly “Peel-A-Way” from a solidified embedded block. Can be used with paraffin, JB-4, GMA, Osteo-Bed and MMA embedding resins. Especially useful for frozen sections where orientation is critical. Available in a variety of sizes.

Cat. #: 18985  Size: T8, 1 case (288 molds)
18986  T12, 1 case (288 molds)
18646A  S22, 1 case (288 molds)
18646B  R30, 1 case (288 molds)
18646C  R40, 1 case (264 molds)
18646D  Asst, 1 pack (48 molds)

PolyFreeze (Tissue Freezing Medium) - 5 Color Kit

Cryo-embedding matrix for frozen specimens. Color makes differentiating multiple specimens easy during sectioning and staining. Experience less curling, less ice artifacts, faster freezing with PolyFreeze. Kit Contains: 4oz. each of the following: Red, Blue, Yellow, Green and Clear. Individual colors also available in 4oz and 6x120ml case.

Cat. #: 19636  Size: 4oz, 1 case (6x120ml)

Acetone, 99.5% - EM grade

Commonly used fixative for cytology specimen. Recommended for use when urates are to be demonstrated. Rate of penetration is fast.

Cat. #: 01921  Size: 1L, 4L, 6 pints

Alcohol Reagent, 100%, Histology Grade

Suitable for most histological procedures. Our histology grade alcohol reagent is composed of 90 parts ethyl alcohol, 5 parts methyl alcohol and 5 parts isopropyl alcohol, v/v blend. Preferred mixture for dehydrating tissue samples.

Cat. #: 24772  Size: 1 kit (7 Color Kit)
24108  1 kit (5 Color Kit)

Clear Advantage - Xylene Substitute

Safe xylene substitute for processing, staining and coverslipping. Clear-Advantage is virtually odorless. Tissue morphology and cell structure definition is exceptional! Compatible with most automated processing units.

Cat. #: 24770  Size: 1 gal, 4x1 gal

Tissue Marking Dyes

Our Marking Dyes for Tissue are designed to perfect orientation of excised surgical specimens. This method of permanently marking the margins of tissue specimens are beneficial to surgeons and pathologists. Available colors: red, green, blue, yellow, black, orange and purple. Replacement dyes also available in convenient 2oz. and 8oz. bottles.

Features:
- No post fixative required - saves time
- Fast drying - high quality opaque pigments
- Dyes can be used on fresh or formalin fixed specimens
- Maintains brilliant color through all phases of processing

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Grossing

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Cat. #: 19636  Size: 4oz, 1 case (6x120ml)
Embedding - Paraffin

**GemCut™ Paraffin**
High polymer paraffin for routine embedding and cutting. Specially formulated for high humidity environments and gives superior cutting with low compression. The color of the wax makes it easier to visualize and orient small biopsies even while using eosin, methylene blue or tissue marking dyes. Melting Point: 56-58°C. Available in six colors. 1 case (4x2.5kg)

**Cat. #:** 24201 | **Color:** Pink Sapphire
24361 | Aquamarine
24362 | Citrine
24363 | Emerald
24364 | Opal
24365 | Amethyst
24366 |

**Peel-A-Way® Micro-Cut Paraffin**
Low polymer content formulation gives improved viscosity, infiltration and embedding. The translucent appearance of the paraffin allows for excellent tissue visibility. The lower polymer content also makes deparaffinization easier with all types of clearing agents. Available in three melting points. 1 case (4x2.5kg)

**Cat. #:** 24201 | **Size:** 1 case, MP: 52°-54°C
24198 | 1 case, 56°-58°C
24202 | 1 case, 62°-64°C

**PolyFin® Paraffin**
Mixture of fine paraffin waxes and copolymer alloys in convenient pellets. Produces ultra-thin compression free ribbons. Provides maximum support for both hard and soft tissue samples while maintaining exceptional clarity. Low 55°C melting point eliminates excessive heat distortion during tissue processing.

**Cat. #:** 19562 | **Size:** 1 case, 1 keg (15kg)

**PEG 4000**
This water soluble, nonionic material can be used like paraffin to infiltrate and embed tissue. Melting point is 53-56°C. Easily removed from sections with 95% ethanol for immunocytochemical and x-ray microanalytical techniques.

**Cat. #:** 16861 | **Size:** 250g

Embedding - Plastic

**Batson’s #17 Anatomical Corrosion Kit**
For ambient temperature preparation of exact anatomical corrosion specimens by injection of liquid plastic. After hardening, tissue is corroded away by a caustic solution, yielding a durable, scientifically exact model for anatomical study. Kit Contains: 940ml monomer base, 100ml catalyst, 50ml promoter, 10g pigment red, 10g pigment blue.

**Cat. #:** 07349 | **Size:** 1 kit

**Embed-It™ Low Viscosity Epoxy Kit**
Modification of the Spurr’s formulation, Embed-It Low Viscosity Epoxy Kit can be used for embedding biological, material and mineralogical samples. The resin readily penetrates into the specimen and cures to a clear hard solid overnight at 60°C.

**Cat. #:** 24300 | **Size:** 1 kit

**Immuno-Bed Kit**
Glycol methacrylate based embedding kit with performance similar to JB-4 and JB-4 Plus in tissue infiltrations, embedding and cutting procedures. Embedded blocks are clear for excellent tissue visibility. Kit Contains: 800ml Solution A, 30ml Solution B, 12g Solution C.

**Cat. #:** 17324 | **Size:** 1 kit

**JB-4® Embedding Kit**
The leading water-soluble, plastic embedding kit for light microscopy. Widely used for research and clinical diagnosis. Yields semi-thin sections (0.5µ-2µ) with excellent morphological preservation. Translucent casts obtained in 90 minutes or less at room temperature. Successfully used in enzyme histochemistry and autoradiography. Kit Contains: 800ml Solution A, 30ml Solution B and 12g catalyst.

**Cat. #:** 00226 | **Size:** 1 kit

**JB-4 Plus® Embedding Kit**
A unique polymer embedding system that gives a higher level of morphological detail than paraffin processed tissues. Offers all the benefits of JB-4, plus additional advantages of: a cooler acting accelerator and the production of clear blocks. Does not require dehydration to absolute alcohol except for dense, bloody or fatty tissue specimens. Excellent for routine stains, special stains and histochemical staining.

**Cat. #:** 18570 | **Size:** 1 kit

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**JB-4® Mini Embedding Kit**
A mini pre-measured and ready-to-use version of the JB-4 Kit. A unique polymer embedding material that gives a higher level of morphological detail than paraffin processed tissues. Water-soluble media, excellent for routine stains, special stains and histochemical staining. **Kit Contains:** 2 - 40ml Embedding Solution A, 2ml Embedding Solution B and 0.50g Benzoyl Peroxide Plasticized in small bottles.

Cat. #: 22507 Size: 1 kit

**JB-4® Plastic Block Holders**
Easy to store plastic block holders for resin. Matte surface for easy marking and a large center hole to prevent bubble formation during polymerization. Block Holders fit securely into embedding molding cavities. Attach to Polysciences' chucks designed for commonly used microtomes.

Cat. #: 15899 Size: 1 box (50)

**Lowicryl® HM20, Non-polar, Hydrophobic, -70º C Embedding Kit**
Lowicryl HM20 Kits are non-polar and used to produce high contrast images of completely unstained thin sections by Z-contrast. HM kits are particularly suitable for dark field observation because of their relatively low density. **Kit Contains:** 3x225gm of monomer E, 1x130gm of crosslinkers D and 1x4.8gm of initiator C (Full line of kits available on website and catalog.)

Cat. #: 02595 Size: 1 kit

**MonoStep Lowicryl® K4-M Polar Embedding Media**
Pre-mixed, ready-to-use Lowicyrl MonoStep Embedding Media saves time and minimizes chemical contact. These products are ideal for use in immunohistochemistry. They are based on our popular Lowicyrl K4M and HM-20 formulations for low temperature embedding or freeze substitution. MonoStep products are especially appropriate for immunolabling, resulting in better preservation of antigenicity and lower background labeling.

Cat. #: 23646 Size: 225g

**Osteo-Bed Bone Embedding Kit**
Formulated for embedding large and small mineralized (undecalcified) bone specimens. Osteo-Bed is a methyl methacrylate-based material that can be removed from the section and allows the use of staining procedures very much like a paraffin section. Also recommended for immunohistochemistry procedures performed on trephines and other non-decalcified bone or soft tissues. Not water-soluble.

Cat. #: 17734 Size: 1 kit

**Osteo-Bed Plus Embedding Kit**
Osteo-Bed Plus Embedding Kit offers the same benefits as Osteo-Bed Bone Embedding Kit with the added benefit of producing much harder blocks for supporting undecalcified bone specimens and bone containing metal implants, grafts and stents. Suitable for use with large and small mineralized (undecalcified) bone sections and hard tissues. **Features:**
- Yields clear, hard blocks for cutting sections
- Ideal for large bone samples sectioned with a heavy-duty microtome
- Infiltrates rapidly and produces high hardness after polymerization

Cat. #: 24889 Size: 1 kit

**Poly/Bed® 812/Araldite 502 Embedding Kit**
For researchers to utilize Mollenhauer’s findings. Poly/Bed 812 is an exact chemical match for Epon 812. Both Araldite 502 and Poly/Bed 812 are useful as an embedding medium with acetone or alcohol dehydration. Epoxy formulations are of lower viscosity than Araldite formulations and provide better penetration into tissue samples. **Kit Contains:** 500g PolyBed 812, 500g Araldite 502, 450g DDSA, 100g DMP-30 and instruction sheet.

Cat. #: 08792 Size: 1 kit

**PolyCut-Ease**
Adding 1% PolyCut-Ease to any epoxy embedding recipe will enable many stress free sections to be cut from a single area of a knife. Preserves the life of your diamond knife edge as it markedly reduces friction as it cuts through the plastic. This additive will not change the block color or EM image quality.

Cat. #: 18615 Size: 100ml

**Quetol 651 Embedding Kit**
Fast penetrating epoxy embedding medium for EM and light microscopy. Polymerized blocks section easier than in ordinary epoxy resin mixture and show excellent electron image contrast. Acts as a dehydrating agent. Water miscible. **Kit Contains:** 1x100ml Quetol 651, 1x250g NSA, 1.30ml DMP-30

Cat. #: 16908 Size: 1 kit
Spurr Low Viscosity Embedding Kit

The low viscosity of the Spurr formulation allows rapid infiltration into tissues, minerals and other dense structures. Facilitates embedments with high lipid contents, hard membranes or highly vacuolated parenchymatous tissues. **Kit Contains:** 450g NSA, 250g ERL 4221, 250g D.E.R. 736, 100g DMAE

Cat. #: 01916  Size: 1 kit

Unicryl™ Resin

A unique, largely hydrophilic, acrylic resin, developed for universal use in EM and light microscopy applications. When fully polymerized, Unicryl demonstrates excellent cutting characteristics. Sectioning surface follows the contours of the tissue during cutting action, producing a highly exposed surface of proteins and nucleic acids for subsequent immunohistochemistry techniques. Resin preserves these structures without interacting or cross-linking with them. Provides optimum sectioning and staining for animal, plant and microbiological tissues.

Cat. #: 22770  Size: 250ml

**Embedding - Distearate**

**Diethylene glycol distearate (DGD)**

A removable embedding medium for thin and thick sections. Used to prepare tissue for immunofluorescent localization of cytoskeletal components.

Cat. #: 01873  Size: 500g

**Poly(ethylene glycol) (n) distearate, Flaked**

A removable embedding medium for thin and thick sections. In thicker sections the exterior surface of mitochondria can be observed whereas in resin-embedded thin sections the mitochondria are most frequently observed in a cross section. Also used for tissue preparation for In-Situ hybridization with nucleic acid probes.

Cat. #: 25096  Size: 100g

**Histoheme**

Developed to assist histologists with bloody specimens such as placental fragments, bone marrow biopsies, liver, spleen and endometrial curettings which tend to harden after processing or dry out. Histoheme allows for long clean paraffin ribbons.

Cat. #: 24774  Size: 250ml

**Soft Block**

Unique formula for softening difficult to cut tissue in paraffin. Effective on bone, nails and tissue. Easy to use, just soak pre-trimmed block surface and cut. Soft Block is environmentally safe, special waste disposal is not required and will not damage equipment.

Cat. #: 24616  Size: 500ml, 1 gal

**Soft Nail**

Unique formulation to soften keratin! Made for very hard complex keratinized hair, nail and skin samples common in Mohs Histology laboratories. Hair, nail and skin samples that have been processed tend to flex and turn becoming challenging to embed and cut. (Not a decalcification solution).

Cat. #: 24775  Size: 250ml

**Total Cutting Solution Kit**

Our Total Cutting Solution Kit provides you with 5 tissue cutting solutions to address decalcification issues and difficult tissue blocks & specimens. **Kit Contains:** Histoheme, Soft Block, Soft Nail, Super Decalcifier I: Delicate, Super Decalcifier II: Heavy Duty & 10 multi-well block holders.

Cat. #: 25388  Size: 1 kit

**Microscope Slides, Control**

Slide allows control specimen and patient’s specimen to be on the same slide with positive identification of both specimens. Allows identical staining procedure to be performed simultaneously on Patient and Control tissue. Slide has a frosted end for easy marking and special coating for enhanced sample adhesion to the slide.

Cat. #: 24012  Size: 1 box (72 slides)

**Microscope Slides, Immunofluorescence**

Durable teflon coating that is acetone-resistant, autoclavable and hydrophobic. Slides are 1” x 3” (25mm x 75mm), 1mm thick and are useful for all fluorescent materials. These glass slides have ten 6mm wells and are frosted on one end for easy labeling.

Cat. #: 18357  Size: 1 box (100 slides)
Microscope Slides, Micropure

Manufactured with optical quality pure glass, Micropure slides contain 47% less iron than water white slides. This allows visualization of true sample color. Slides have better hydrolytic resistance, resist leaching/clouding and feature increased wettability. Sandblasted 25mm x 75mm

Cat. #: 22245  Size: 1 box (72 slides), 1 gross

Microscope Slides, Poly-L-Lysine Coated

Slides are coated with Poly-L-Lysine to permit electrostatic coupling of sample to slide. Use of Poly-L-Lysine Microscope Slides does not affect staining procedures. 25mm x 75mm x 1mm

Cat. #: 22247  Size: 1 box (72 slides)

Microscope Slides, Tissue Tack (+ Charged)

Treated with a specially formulated aminoalkylsilane, Tissue Tack slides provide a positively charged surface, which permits instant coupling of negatively charged tissue sections. The resultant bond stands up to the very aggressive solutions used in In-Situ Hybridization procedures. Slides are available with a white label.

Cat. #: 24216  Size: 1 box (72 slides)

PolyGuard Paraffin Repellent

Xylene free paraffin repellent. Used to create a protective coating on surfaces exposed to paraffin as well as to clean adhering paraffin off laboratory counterparts and equipment. PolyGuard will help keep your equipment and countertops clean and tidy.

Cat. #: 21168  Size: 120ml, 1 case (6x120ml)

StainRITE® Routine Stains

Eosin Y, 0.5% alcoholic solution, Acidic

Used as a cytoplasmic counterstain with hematoxylin; contains acetic acid. Ready-to-use with any automated stainer.

Cat. #: 09859  Size: 500ml, 1000ml, 3.75L

Eosin Y, 1.0% alcoholic solution, Non-Acidic

Cytoplasmic counterstain. Used in hematoxylin and eosin staining. Contains no acetic acid. Ready-to-use with any automated stainer.

Cat. #: 17269  Size: 500ml, 1000ml

Gill’s Hematoxylin #1 for Cytology

Formulated for routine cytology staining. This single strength formula optimally stains gynecological and non-gynecological specimens. Can be used for staining filters and membranes. General purpose nuclear stain, progressive type. Used with hematoxylin and eosin staining.

Cat. #: 24242  Size: 500ml, 1000ml

Gill’s #2, double strength for Histology & Cytology

Used when a stronger or darker nuclear stain is required for cytology or immunohistochemistry (IHC) counterstaining. Gill’s #2 formulation is a double strength mixture, stains darker and more quickly than Gill’s #1. General purpose nuclear stain, progressive type. Used with hematoxylin and eosin staining.

Cat. #: 24243  Size: 500ml, 1000ml

Gill’s #3, triple strength for Histology

Appropriate for routine histology staining where a darker nuclear stain is desired. This is a triple strength formula requiring shorter staining times. Formula is very stable and does not require filtering prior to each use. General purpose nuclear stain, progressive type. Used with hematoxylin and eosin staining.

Cat. #: 24244  Size: 500ml, 1000ml

Hematoxylin, C.I. 75290, certified (Natural black 1)

Nuclear protein stain and glycogen stain. General tissue stain for human, animal and/or VIP histology. Molecular Weight: 302.3

Cat. #: 02749  Size: 25g, 100g

Harris Hematoxylin, Acidified (mercury-free)

Used with hematoxylin and eosin staining. Use Harris Hematoxylin for routine histology and cytology. Similar results can be achieved to those of Gill’s Hematoxylin #1, #2 and #3 formulations by varying staining times. General purpose nuclear stain, regressive type.

Cat. #: 24245  Size: 500ml, 1000ml

Mayers Hematoxylin

Use for both cytology and histology. General purpose, progressive type nuclear stain used with hematoxylin and eosin staining. Useful as a counterstain for immunohistochemistry procedures.

Cat. #: 24821  Size: 500ml, 1L

OG-6 & EA (Gill’s Modified)

Orange-6 and EA are the two cytoplasmic counterstain solutions that are used sequentially in the Papanicolaou staining method for clinical cytology. Gill’s modified OG-6 and EA are stable in solution and give predictable high quality staining results not previously possible with other formulations.

Cat. #: 09782  Size: 500ml, 1000ml, 3.75L (OG-6)

09783  500ml, 1000ml, 3.75L (EA)

Eosin Y, 0.5% alcoholic solution, Acidic

Used as a cytoplasmic counterstain with hematoxylin; contains acetic acid. Ready-to-use with any automated stainer.

Cat. #: 09859  Size: 500ml, 1000ml, 3.75L

Eosin Y, 1.0% alcoholic solution, Non-Acidic

Cytoplasmic counterstain. Used in hematoxylin and eosin staining. Contains no acetic acid. Ready-to-use with any automated stainer.

Cat. #: 17269  Size: 500ml, 1000ml
Neat Stain Gram Stain Kit

Useful in staining bacteria from cultures or specimens by the differential Gram stain method. Staining characteristics are similar to traditional Wright's and Wright-Giemsa stains. Neat Stain offers the flexibility of a three dip staining sequence in both the stain and counterstain solution. Kit performs 150 tests.

Cat. #: 25036  Size: 1 kit

Neat Stain Trichrome Stain Kit

For staining stool specimens. Based upon the Wheatley Trichrome technique which is a rapid staining procedure providing optimal results for routine examination. Simplified method - use of a mordant prior to staining is not necessary. Kit performs 75 tests.

Cat. #: 25035  Size: 1 kit

Wright-Giemsa Stain Solution

Romanowsky stain useful for blood films, parasites and bone marrow aspirates. Prepared from certified dyes. Ready-to-use solution makes the differentiation of human blood cells much easier to identify. Based on a commonly used Azure-Eosin formula.

Cat. #: 24985  Size: 1L, 10L

Wright-Giemsa Stain Phosphate Buffer pH 6.8

This Phosphate Buffer yields satisfactory staining results every time when used with Wright-Giemsa stains. The buffer used in the Wright-Giemsa staining protocol needs to be pH 6.8 to achieve satisfactory results.

Cat. #: 24984  Size: 1L, 4L

Wright Stain Solution

Dual purpose stain used for staining blood smears and bone marrow aspirates. Ready-to-use solution makes the differentiation of human blood cells much easier to identify.

Cat. #: 24986  Size: 1L, 4L, 20L

Wright Stain Phosphate Buffer pH 6.8

This phosphate buffer yields satisfactory staining results every time when used with the Wright staining method. The buffer used in the Wright staining protocol needs to be pH 6.8 to achieve satisfactory results.

Cat. #: 24989  Size: 1L, 4L

May-Grünwald Stain Solution

Classic hematology stain that produces dense coloration in the staining of peripheral blood smears and bone marrows.

Cat. #: 24981  Size: 1L, 4L

Giemsa Stain (for May-Grünwald)

Giemsa stain (for May-Grünwald) is a classic blood film stain for peripheral blood smears and bone marrow specimens, used to visualize chromosomes, stains fungus histoplasma and identifies mast cells.

Cat. #: 25038  Size: 100ml, 400ml

May-Grünwald Giemsa Phosphate Buffer pH 7.2

For use as a buffer in May-Grünwald, Wright Stain, Wright-Giemsa and Leishman staining procedures.

Cat. #: 25032  Size: 1L, 4L

Bluing Reagents

Ammonium Blue

Rapid formulation for bluing hematoxylins in only 3 minutes. Ammonium Blue is buffered at an alkalinity of pH 10.0. Our premixed and ready-to-use Ammonium Blue provides crisp nuclear detail obtained with hematoxylin and eosin stains. For use in both cytology and histology.

Cat. #: 24819  Size: 1 gal

Lithium Blue

Lithium Blue is a gentle yet rapid formulation for bluing hematoxylins in only 5 minutes. Lithium Blue is buffered at an alkalinity of pH 8.0. Our premixed and ready-to-use Lithium Blue provides crisp nuclear detail obtained with Gills, Mayer’s and Harris’ Hematoxylin stains. For use in both cytology and histology.

Cat. #: 24820  Size: 1 gal

Scott’s Bluing Reagent

Gentle bluing reagent formulation for those specimens that may be affected by more harsh agents. Our premixed and ready-to-use Scott’s Bluing Reagent provides rapid bluing and crisp nuclear detail obtained with routine hematoxylin and eosin stains. For use in both cytology and histology.

Cat. #: 24605  Size: 100ml, 1 gal
### Clarifiers

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rapid Acid Alcohol Decolorizing Solution</strong></td>
<td>Decolorizing solution for removing excess hematoxylin from tissue and residual staining from slides. Accentuates cell structure and clarity. Decolorizing step takes just twenty seconds.</td>
</tr>
<tr>
<td><strong>Rapid Acid Alcohol Differential Solution</strong></td>
<td>Differentiation solution for removing excess hematoxylin from tissues to accentuate structure and cell clarification. Cells retain dye while all other components lose the stain. High degree of selectivity in regressive staining protocols. Differentiating step takes ten seconds.</td>
</tr>
</tbody>
</table>

### StainRITE® Special Stains

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AFB Kinyoun Kit (Cold Method)</strong></td>
<td>Method of staining acid-fast microorganisms, specifically mycobacterium. Similar to Ziehl-Neelson stain without heating. Kinyoun carbol-fuschin has a greater concentration of phenol and basic fuchsin and does not require heating in order to stain properly. Acid-fast organisms stain red, non-acid-fast organisms stain blue.</td>
</tr>
<tr>
<td><strong>AFB Rhodamine-Auramine Kit (Fluorescent)</strong></td>
<td>Identification of Mycobacteria with rhodamine-auramine is due to the affinity of the mycolic acid in the cell walls for the fluorochromes. These dyes will bind to the Mycobacteria, that appear bright yellow or orange against a greenish background. All acid fast organisms will be stained by rhodamine-auramine, including the sporozaan parasites.</td>
</tr>
<tr>
<td><strong>AFB Ziehl Neelson Kit (Hot Method)</strong></td>
<td>Used to identify acid-fast organisms, mainly Mycobacteria. Helpful in diagnosing Mycobacterium tuberculosis since its lipid rich cell wall makes it resistant to Gram stain. Also stains other bacteria like Nocardia. Acid-fast bacilli stain bright red, non-acid fast organisms stain blue or green.</td>
</tr>
<tr>
<td><strong>Amyloid Stain Kit (Congo Red)</strong></td>
<td>Complete kit to aid in the staining of tissue for Amyloidosis. Amyloid Stain Kit used in the detection of amyloid FFPE as well as frozen tissue sections cut at 10 microns. The amyloid stains red and the nuclei stains blue. Control tissue is Alzheimer’s or other known amyloidosis.</td>
</tr>
</tbody>
</table>

### Biebrich Scarlet - Acid Fuchsin Solution

For use in Masson Trichrome stain procedure. Our ready-to-use format eliminates the exposure to potentially irritating powdered dyes. (1% Acetic Acid, .9% Biebrich Scarlet, 0.1% Fuchsin) |

| Cat.#: 24602 | Size: 100ml |

### Delicate Melanin Bleach Kit for Special Stains and IHC

Removing melanin from tissue sections allows for positive staining to be interpreted correctly especially if DAB is used when performing immunohistochemistry. Saves time, by removing melanin pigment prior to incubation with primary antibody. Also used in IHC. |

| Cat.#: 25397 | Size: 1 gal |

### Differential Quik Stain Kit (Modified Giemsa)

High quality, rapid turnaround staining kit. Useful for differential assessment of blood smears, detecting H. pylori microorganisms and immediate interpretation of fine needle aspiration biopsies. Kit Contains: a fixative for air-dried cell suspensions and/or touch preparation slides. Results in as little as 15 seconds! |

| Cat.#: 24609 | Size: 1 kit |

### Fungi-Fluor® Kit for Fungal Detection

Offers a quick fluorescent stain/counterstain procedure for various fungal organisms. The kit can be used to screen a variety of specimen types from sputum to skin scrapings for fungal detection. |

| Cat.#: 17442 | Size: 250ml, 500ml, 1 gal |

### Fungi-Fluor® Pneumocystis Kit

Offers a fast, fluorescent staining procedure for Pneumocystis carinii in bronchial specimens. Advantages include: Slides are permanent and can be reactivated if fluorescence dims. Minimal prep and clean-up, stain for 3 minutes and read. Specimen Types: Bronchoalveolar lavage (BAL), Bronchial brush or wash, Touch prep of fresh tissue. Paraffin section and frozen sections. Kit performs 100 tests. |

| Cat.#: 22363 | Size: 1 kit |

### Gomori’s Trichrome Stain Kit

For visualization of collagenous connective tissue fibers in tissue sections, primarily for distinguishing collagen from smooth muscle tissue. |

| Cat.#: 24205 | Size: 1 kit |
Gram's Stain Kit with Iodine
Used to stain microorganisms from cultures or specimens by the differential Gram method. Separates bacterial species into two large groups, those that retain the primary dye (gram-positive) and those that lose the primary dye and take the color of the secondary dye (gram-negative). The mechanism of gram stain is based on the distinctive chemistry and physical properties of the cell wall.

Cat. #: 24668 Size: 1 kit

Grocott Methenamine Silver Stain (GMS)
For the visualization of fungi and Pneumocystis jiroveci in tissue sections. Fungi and P. jiroveci are stained black, while other tissue elements stain green. Can be used on tissue, aspirates or smears. The alkaline hexamine-silver solution allows silver ions, upon reduction to appear dark or black.

Cat. #: 25087 Size: 1 kit

Jones PAS-M Stain Kit
Improved Jones PAS-M technique. Method utilizes an enhancer to accelerate the methenamine silver reaction with the glomerular basement membranes, while reducing the time to achieve results. Used in kidney biopsies. Jones PAS-M may also be used for plastic sections for glomerular and tubular basement membranes.

Cat. #: 25091 Size: 100 ml, 500ml

Leishman Stain
For staining bone marrow and blood smears to identify leukocytes, malarial parasites and trypanosomes. Can be used as an easy alternative to the Wright or Giemsa stain.

Cat. #: 25001 Size: 25g

Luxol Fast Blue, Ready to Use
Luxol Fast Blue demonstrates myelin and also differentiates between the white and gray matter of the brain. Myelin, including phospholipids appear blue while the gray and demyelinated white matter appear colorless.

Cat. #: 24611 Size: 500ml

Masson's Trichrome Stain Kit
This method is used for the detection of collagen fibers in tissues such as skin, heart, muscle on formalin-fixed, paraffin-embedded sections. It may be used for frozen sections as well. Collagen fibers stain blue and nuclei stain black. Available in 100ml and 500ml kits.

Cat. #: 25088 Size: 100ml, 500ml

Multiple Stain Solution (Paragon Stain)
One Step procedure with H & E quality staining. Used in Tzanck preparations of herpetic lesions and to differentiate acidophilic and basophilic structures. Stain can be directly applied to frozen sections, epoxy or JB-4 embedded sections and utilized as a general cytoplasmic and nuclear stain. MSS also differentiates various cytologic processes, including basal cell & squamous cell carcinomas, malignant melanoma, B-cell lymphoma, acute myelomonocytic leukemia and metastatic breast cancer. Replacement for Paragon Multiple Stain (PMS).

Cat. #: 08824 Size: 50ml, 100ml

Neat Stain Trichrome Stain Kit
For staining stool specimens. Based upon the Wheatley Trichrome technique which is a rapid staining procedure providing optimal results for routine examination. Simplified method - use of a mordant prior to staining is not necessary. Kit performs 75 tests.

Cat. #: 25035 Size: 1 kit

Periodic Acid Schiff’s (PAS) Stain Kit
Used to demonstrate polysaccharides, neutral mucosubstances and basement membranes in tissue. A section of kidney is the most sensitive control. Kit is supplied with Harris Hematoxylin Acidified as the counterstain.

Cat. #: 24200 Size: 1 kit

Picosirius Red Stain Kit
Binds specifically to collagen fibrils of varying diameter used to distinguish collagen Type I from Type III. Picosirius Red Stain will demonstrate the amount of collagen in a given area of myocardial tissue. Picosirius red-hematoxylin is recommended for examination of normal or pathologic dental specimens. Available in 250ml and 500ml kits.

Cat. #: 24901 Size: 250ml, 500ml

Prussian Blue Iron Stain Kit
Histochemical reaction used to demonstrate ferric iron and ferritin. This is not a true staining technique. Protein is split off by the hydrochloric acid, allowing the potassium ferrocyanide to combine with the ferric iron. This forms the ferric ferrocyanide or Prussian Blue.

Cat. #: 24199 Size: 1 kit

Rapid Mucin Stain Kit
Inflammation can cause secretion of mucin as well as some types of intestinal carcinomas. Can quickly determine the presence of mucin in epithelial and connective tissue, and assist the diagnosis.

Cat. #: 24208 Size: 1 kit
**TB Fluorostain Kit**
Fluorochrome staining of mycobacteria in an acid fast smear offers several advantages over traditional carbol-fuchsin methods. Fluorescent mycobacteria stand out brightly on darkened backgrounds. Perform staining in less than 12 minutes. Uses less Auramine O and Rhodamine B, reducing costs and hazards. Kit performs 100 test.

**Cat. #: 22422**  **Size:** 1 kit

**Terry’s Polychrome Methylene Blue 2% Aqueous**
Stat staining method for unfixed and fixed tissue. Stains nuclei more strongly than cell cytoplasm. Excellent dye for nuclear and nucleolar details. Can be used to demonstrate erythrocyte alterations/inclusions and some erythrocyte parasites, as well as to visualize reticulocytes. Methylene blue is different from Romanowsky stains.

**Cat. #: 09798**  **Size:** 470ml

**Weigert's Hematoxylin Kit (Solution A & B)**
A nuclear staining solution containing, hematoxylin, ferric chloride and hydrochloric acid used in many non-routine techniques (special stains) because, it resists decolorization in acidic staining solutions. Ferric Chloride is a strong oxidizer, so it serves both as a mordant and oxidizer for Weigert’s Hematoxylin.

**Cat. #: 25373**  **Size:** 250 ml

**Villanueva Osteochrome Bone Stain**
Useful for staining fresh, fixed, unembedded or plastic-embedded sections of bone. Villanueva Osteochrome Bone Stain gives uniform and reproducible results. Useful in studying biopsy or postmortem tissue.

**Cat. #: 16280**  **Size:** 450ml

**Von Kossa Method for Calcium Kit**
Demonstrates only calcium phosphate and calcium carbonate salts. Used as a bone stain to indicate osteomalacia or in other paraffin embedded tissues to stain calcium deposits seen in metabolic diseases, Paget’s disease, renal osteodystrophy & hyperparathyroidism, necrotic areas associated with TB, infarction (Gandy Gamma bodies), atheroma in blood vessels and Malakoplakia in the bladder (Michaelis-Gutman bodies). Each kit will stain 500 slides.

**Cat. #: 24633**  **Size:** 1 kit

**Weigert’s Polychrome Methylene Blue 2% Aqueous**
Stat staining method for unfixed and fixed tissue. Stains nuclei more strongly than cell cytoplasm. Excellent dye for nuclear and nucleolar details. Can be used to demonstrate erythrocyte alterations/inclusions and some erythrocyte parasites, as well as to visualize reticulocytes. Methylene blue is different from Romanowsky stains.

**Cat. #: 09798**  **Size:** 470ml

**Verhoeff Van Gieson Elastin Stain Kit**
Useful in demonstrating atrophy of elastic tissue in cases of emphysema, thinning and loss of elastic fibers in arteriosclerosis and other vascular diseases. It can also help to identify normal elastic tissue, such as arteries and veins; and to determine whether tumor is present in the blood vessels.

**Cat. #: 25089**  **Size:** 1 kit

**Villanueva Osteochrome Bone Stain**
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A nuclear staining solution containing, hematoxylin, ferric chloride and hydrochloric acid used in many non-routine techniques (special stains) because, it resists decolorization in acidic staining solutions. Ferric Chloride is a strong oxidizer, so it serves both as a mordant and oxidizer for Weigert’s Hematoxylin.

**Cat. #: 25373**  **Size:** 250 ml

**Mounting Media**

**Aqua-Poly/Mount**
Water-soluble, non-fluorescing mounting medium. Formulated for mounting sections from aqueous solutions. Useful for immunofluorescent techniques. Can be used for frozen sections, special stains such as Oil Red O and immuno-stains when aqueous mounting media is required.

**Cat. #: 18606**  **Size:** 20ml, 100ml, 5x20ml

**CitraMount™ Medium**
Butyl acetate and acrylic mixture is the first mounting medium developed that allows coverslipping directly from d-limonene based clearance. Also compatible with xylene and Clear-Advantage xylene substitute clearant. Obtain clear seals and decreased drying times to less than 24 hours! Viscosity: 90 cps  Refractive Index: 1.484

**Cat. #: 24214**  **Size:** 500ml, 100ml

**Mowiol® 4-88**
High quality anti-fade medium to be used for immunofluorescence, as well as many molecular biology applications. It hardens and has the same refractive index as immersion oil. If used for immuno-fluorescence applications, the addition of glycerin is recommended.

**Cat. #: 17951**  **Size:** 500g

**PolyGlass Coverslipping Medium**
Non-water soluble liquid coverslipping media designed to eliminate the use of coverslips. Non-yellowing and scratch resistant, PolyGlass simplifies the protection of prepared slides. Refractive index is near 1.48 and can be removed if necessary by soaking in toluene or xylene. Ideal for uneven thick sections that cause air bubbles under a coverslip with routine procedures. **Viscosity:** 149 cps.

**Cat. #: 22253**  **Size:** 120ml, 6x120ml

**Poly-Mount®**
Crystal clear medium providing superior optical clarity and preserving most biological dyes with little or no fading. Miscible with toluene and xylene. Viscosity: 192 cps. Refractive index: 1.484

**Cat. #: 08381**  **Size:** 120ml, 940ml

**Tissue-Tack™ Adhesive**
(for JB-4®, JB-4® Plus and Immuno-Bed)
Adheres tissue sections to slides during immunostaining and routine histology staining procedures. Tissue-Tack is an acrylic-based adhesive which has been used successfully to attach JB-4 sections to slides when conventional section adhesives have proved to be insufficient.

**Cat. #: 16672**  **Size:** 100ml, 500ml

**CitraMount™ Medium**
Butyl acetate and acrylic mixture is the first mounting medium developed that allows coverslipping directly from d-limonene based clearance. Also compatible with xylene and Clear-Advantage xylene substitute clearant. Obtain clear seals and decreased drying times to less than 24 hours! Viscosity: 90 cps  Refractive Index: 1.484

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**Cat. #: 16672**  **Size:** 100ml, 500ml
**Immunohistochemistry**

**Citrate Buffer Kit, pH 6.0 for Antigen Retrieval**

Citrate based buffer solution designed to break protein cross-links, unmasking antigens and epitopes in formalin-fixed and paraffin embedded tissue sections. Solution has pH of 6.0, available in 1X and 20X, 10mM concentrations.

- Cat. #: 25084 (1x10mM) Size: 1 kit
- Cat. #: 25079 (20x10mM) 1 kit

**DAB-4HCL (3-3’-Diaminobenzidine tetrahydrochloride)**

**Immunohistochemical Grade**

Chromogen of choice for immunoperoxidase techniques. The brown reaction product is highly insoluble, and will not diffuse from the site of localization. The color does not fade, and therefore, slides can be saved as a permanent record. The reaction product also chelates with osmium tetroxide and becomes electron dense for use in electron microscopy.

- Cat. #: 04001 Size: 2x25 mg/60 ml vials
- Cat. #: 04001 Size: 5x25 mg/60 ml vials

**IHC Hematoxylin/Bluing Kit**

Formulated to impart light nuclear counterstaining desired with immunohistochemical chromogen staining. Controlled nuclear counterstaining will not over-stain and obscure nuclear IHC staining. Ready-to-use kit.

- Cat. #: 25082 Size: 1 kit

**L.A.B. Solution (Liberate Antibody Binding Solution)**

Liberates antibody binding sites for improved IHC staining. Incubate for 5-20 minutes at room temperature, rinse with buffer and stain, it’s that simple. Ready-to-use solution, no dilution, high temperature or special equipment required. Compatible with automated stainers.

- Cat. #: 24310 Size: 500ml

**Melanin Bleach Kit**

Cell detail may be obscured when melanin pigment is present in large quantity. Melanin Bleach Kit removes the melanin, facilitating specimen analysis. Removing melanin from tissue sections allows for positive staining to be interpreted correctly especially if DAB is used when performing immunohistochemistry. Kit also has the ability to serve as an screening factor for the presence of melanin. **Kit Contains:** 250ml solution A and B.

- Cat. #: 24883 Size: 1 kit

**Peroxidase IHC Blocker, Ready to Use**

Block Endogenous Peroxidase Activity! Many cells and tissues contain endogenous peroxidase and can increase your signal to noise ratio in IHC staining. Reduces non-specific background stain by treating sections prior to antigen retrieval. IHC staining patterns will be clean and more specific after treatment. Ready-to-Use formula.

- Cat. #: 24776 Size: 250ml

**pH Regulator for Antigen Retrieval, 1M NaOH**

For use with IHC buffers, solution brings buffers back to appropriate pH levels.

- Cat. #: 25083 Size: 500ml

**Tris Buffered Saline (TBS), pH 8.0 ±0.2, 10X Concentrate**

Buffered saline solution for use with antigen retrieval solutions.

- Cat. #: 24082 Size: 1L, 500ml

**Triton® X-100**

A non-ionic surfactant used for extraction of membrane bound proteins under gentle non-denaturing conditions.

- Cat. #: 04605 Size: 1 kit

**Molecular Biology**

**Guanidine Isothiocyanate Solution, 4M**

Used in purification of RNA from cultured cells for use in Northern, S1 and SP6 analysis and prepared according to the methods of Chirgwin and Han. **Molecular Weight:** 118.16

- Cat. #: 25070 Size: 500ml

**Guanidine Isothiocyanate, Ultrapure**

Used to isolate RNA from sources like pancreas and high molecular DNA from procaryotic organisms that require strong enzyme detergent lysis and organic treatment. Strong protein denaturant when used in high concentrations. **Molecular Weight:** 118.1

- Cat. #: 25071 Size: 500g

To view our full product line visit polysciences.com/lifesciences