# Simplicity for Science




# Stain Kits

# About Us

Atom Scientific is a specialised manufacturer of diagnostic reagents with over 50 years in delivering exceptional quality to the life science industry throughout the world

## History

Established in 2009, Atom Scientific is a specialist manufacturer of diagnostic stains and reagents for Life Science Laboratories

As the business has grown it has organically grown its product range to incorporate a comprehensive range of chemicals to suit our customer's needs

Our Primary Aims are to deliver:

- **Quality**
- **Service**
- **Cost Effective Pricing**

## Quality

Our Quality Management Systems are Certificated to **ISO9001:2008**

Our QA/Compliance Team ensure our products are fully auditable from raw material to finished product

Our Life Science Testing Laboratory is operated by experienced Life Scientists, ensuring our products are compliant to the requirements of **ISO15189**, saving our customers time and resources in compliance, whilst ensuring consistent quality

## Facilities

In 2014, the company opened our current single site facility in Manchester, enabling Atom Scientific to significantly increase operational capacity, whilst ensuring compliance to all current and future legislation. We specialise in finished product pack sizes from 10ml/10gm to 25L/25Kg and have manufacturing capacity for batches from 500ml - 5000L

Our facilities can accomodate single bottle requirements up to multiple 1000's to meet any lead time requirement

All chemicals and reagents offered by Atom Scientific are manufactured, packed and distributed on-site

Our philosophy is to make science simple, we deliver high quality validated products, in fit for purpose packaging, safely shipped, at competitive prices, where you want them, when you need them

CE

ISOQAR REGISTERED 0026 — UKAS MANAGEMENT SYSTEMS

Certificate No: 11337
ISO 9001

IVD



## Contact Us

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## Orders

Orders can be placed On-Line, by Email or by Fax

orders@atomscientific.com

All orders must include Delivery and Invoice Address and product information as follows:

- Product Code
- Product Name
- Pack Size
- Qty
- Price

All prices on website or in price lists are quoted ex-works on an E, O&E basis

## Technical

Atom provide a Technical Resource on our website, where the following can be downloaded:

- Material Safety Data Sheet (MSDS)
- Certificate of Conformity
- Certificate of Analysis
- Product Protocols

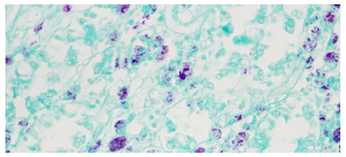
If we hold a Technical email address for you, a full MSDS will be emailed automatically at point of despatch
If you need technical assistance, please contact:

technical@atomscientific.com

ATOM SCIENTIFIC

**ISO15189** compliant products ***simply*** delivering consistency and reliability to **Life Sciences**

**www.atomscientific.com**



# AFB (Light Green Counterstain)

This stain kit is used for the staining of Mycobacterium Tuberculosis and other acid fast organisms in tissue sections and smears. The walls of Mycobacteria are not readily penetrated so phenol is mixed with the basic fuchsin to overcome this. No heat is required for this method

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK41 | 4 x 50ml | 4 x 100ml | 4 x 250ml | 4 x 500ml |

## Kit Contents

Carbol Fuchsin Kinyoun

TB Differentiator x 2

Light Green 0.5% Aqueous

## General Information

| | |
|---|---|
| Procedure Time | 20 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Acid fast bacilli (M.tuberculosis): | Magenta/red |
| Cells and background material, other organisms: | Green |

## Protocol

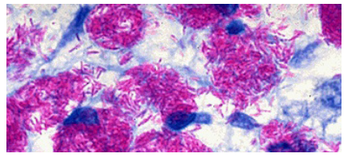
Smears: Prepare smears on cleaned slides and air dry for 5-10 minutes. Fix in absolute ethanol for 10 minutes
Tissues: A standard formaldehyde based fixative provides satifactory results. Tissues should be processed and embedded in paraffin wax and cut at 5 microns

1. Dewax sections, hydrate through alcohols and rinse in tap water. For smears flood slides with distilled water
2. Flood the slides with carbol fuchsin Kinyoun for 5 minutes
3. Wash well in distilled water
4. Differentiate with TB differentiator until preparation is colourless or pale pink (until no more dye runs out), approximately 3-5 seconds
5. Wash well in distilled water
6. Counterstain with light green for 1 minute
7. Wash well in distilled water
8. Dehydrate rapidly, clear and mount

## Hazard Information

**UN1992**





# AFB (Methylene Blue Counterstain)

This stain kit is used for the staining of Mycobacterium Tuberculosis and other acid fast organisms in tissue sections and smears. The walls of Mycobacteria are not readily penetrated so phenol is mixed with the basic fuchsin to overcome this. No heat is required for this method

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK42 | 4 x 50ml | 4 x 100ml | 4 x 250ml | 4 x 500ml |

## Kit Contents

Carbol Fuchsin Kinyoun

TB Differentiator x 2

Methylene Blue (AFB)

## General Information

| | |
|---|---|
| Procedure Time | 20 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Acid fast bacilli (M.tuberculosis): | Magenta/red |
| Cells and background material, other organisms: | Blue |

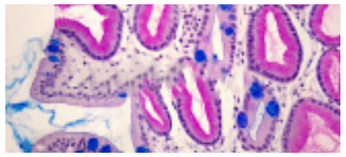
## Protocol

Smears: Prepare smears on cleaned slides and air dry for 5-10 minutes. Fix in absolute ethanol for 10 minutes
Tissues: A standard formaldehyde based fixative provides satisfactory results. Tissues should be processed and embedded in paraffin wax and cut at 5 microns

1. Dewax sections. hydrate through alcohols and rinse in tap water. For smears flood slides with distilled water
2. Flood the slides with carbol fuchsin Kinyoun for 5 minutes
3. Wash well in distilled water
4. Differentiate with TB differentiator until preparation is colourless or pale pink (until no more dye runs out), approximately 3-5 seconds
5. Wash well in distilled water
6. Counterstain with methylene blue (AFB) for 15 seconds
7. Wash well in distilled water
8. Dehydrate, clear and mount

## Hazard Information

**UN1992**



# Alcian Blue PAS Stain Kit

This stain kit is used for the staining of sulphated and carboxylated acid mucopolysaccharides, and for carbohydrate radicles (e.g. glycogen). The alcian blue and PAS technique combines to differentiate neutral mucins from acidic mucins. It is used as a broad spectrum stain for mucins, a lack of staining with the combined PAS stage indicates the substance is not mucin

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK6 | 4 x 50ml | 4 x 100ml | 4 x 250ml | 4 x 500ml |

## Kit Contents

| | |
|---|---|
| Periodic Acid Solution 1% | Alcian Blue 1% in 3% Acetic Acid (pH 2.5) |
| Haemalum Mayer | |
| Schiff reagents (Feulgen) | |

## General Information

| | |
|---|---|
| Procedure Time | 60 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | Schiff reagent 2-8 ° C / Other Reagents 15-25 2-8 ° C |

## Results

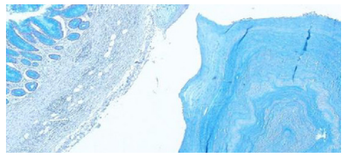
| | |
|---|---|
| Acid mucins (sulfomucins and sialmucins): | Blue |
| Mixtures of both: | Purple |
| Neutral mucins, Glycogen, various glycoproteins: | Red |
| Proteoglycans and hyaluronic acid: | Blue |
| Nuclei: | Pale Blue |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Stain in alcian blue for 10 minutes
3. Wash well in distilled water
4. Treat with periodic acid 1% solution for 5 minutes
5. Wash well with distilled water.
6. Treat with Schiff reagent for 20 minutes.
7. Wash in running tap water for 5-10 minutes (sections should macroscopically be pink/magenta in colour)
8. Stain sections in haemalum Mayer for 1 minute
9. Rinse in running water, differentiate in 0.5% acid alcohol and blue in running water or Scotts tap water substitute
10. Dehydrate, clear and mount

## Hazard Information





# Alcian Blue Stain Kit (pH1.0)

This stain kit is used for the staining of sulfomucins and sulphate containing proteoglycans. Tissues that exhibit this staining include cartilage, goblet cell mucins of the large intestine and mucins of the bronchial serous glands

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK300 | 2 x 50ml | 2 x 100ml | 2 x 250ml | 2 x 500ml |

## Kit Contents

| |
|---|
| Alcian Blue 8GX 1% in 0.1N HCL |
| Haemalum Mayer |

## General Information

| | |
|---|---|
| Procedure Time | 40 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

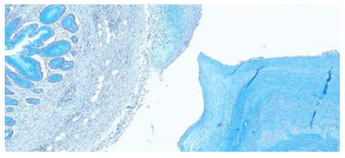
## Results

| | |
|---|---|
| Carboxylated Sialomucins, Hyaluronic Acid: | No Staining |
| Sulphated Mucins, Proteoglycans: | Blue |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Stain in the alcian blue 8GX 1% in 0.1N HCL for 30 minutes
3. Wash well in distilled water
4. Stain nuclei LIGHTLY with haemalum Mayer for 30 seconds - 1 minute
5. Differentiate quickly and blue in running water or Scotts tap water substitute
6. Dehydrate, clear and mount

## Hazard Information



# Alcian Blue Stain Kit (pH2.5)

This stain kit is a broad spectrum stain for mucins. It demonstrates sialomucins, sulfomucins and proteoglycans. Alcian Blue has been demonstrated to bind and precipitate hyaluronic acid, chondroitin sulphate and heparin from an aqueous solution, but does not precipitate glycogen hence is glycogen negative unlike PAS which is positive

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK400 | 3 x 50ml | 3 x 100ml | 3 x 250ml | 3 x 500ml |

## Kit Contents

- Alcian Blue 8GX 1% in 3% Acetic Acid
- Neutral Red 0.1% Aqueous
- Acetic Acid 3% solution

## General Information

| | |
|---|---|
| Procedure Time | 45-50 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

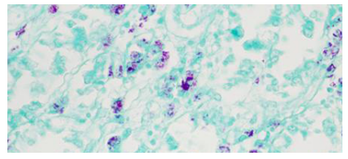
| | |
|---|---|
| Acid mucosubstances, hyaluronic acid, sialomucins: | Blue/Green |
| Nuclei/Cytoplasm: | Red |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Stain in 1% Alcian Blue for 30 minutes
3. Rinse in 3% acetic acid for 10-20 seconds
4. Wash in running tap water for 5 minutes
5. Counterstain in 0.5% neutral red for 3 minutes
6. Rinse quickly in water and blot dry
7. Dehydrate quickly, clear and mount

## Hazard Information





# Cold Kinyoun Stain Kit, Malachite Green

This stain kit is used for the staining of Mycobacterium Tuberculosis and other acid fast organisms in tissue sections and smears. The walls of Mycobacteria are not readily penetrated so phenol is mixed with the basic fuchsin to overcome this. No heat is required for this method

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK7 | 4 x 50ml | 4 x 100ml | 4 x 250ml | 4 x 500ml |

## Kit Contents

- Carbol Fuchsin Kinyoun
- TB Differentiator x 2
- Malachite Green 0.5% Aqueous

## General Information

| | |
|---|---|
| Procedure Time | 15 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

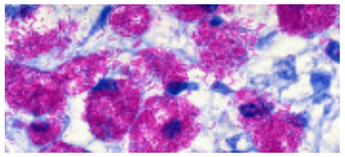
| | |
|---|---|
| Acid fast bacilli (M.tuberculosis): | Magenta/red |
| Cells and background material, other organisms: | Green |

## Protocol

1. Dewax sections, hydrate theough alcohols and rinse in tap water. For smears flood slides with distilled water
2. Flood the slides with carbol fuchsin Kinyoun for 5 minutes
3. Wash well in distilled water
4. Differentiate with TB differentiator until preparation is colourless or pale pink (until no more dye runs out), approximately 3-5 seconds
5. Wash well in distilled water
6. Counterstain with malachite green for 1 minute
7. Wash well in distilled water
8. Dehydrate, clear and mount

## Hazard Information

**UN1992**



# Cold Kinyoun Stain Kit (Methylene Blue Counterstain)

This stain kit is used for the staining of Mycobacterium Tuberculosis and other acid fast organisms in tissue sections and smears. The walls of Mycobacteria are not readily penetrated so phenol is mixed with the basic fuchsin to overcome this. No heat is required for this method

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK8 | 4 x 50ml | 4 x 100ml | 4 x 250ml | 4 x 500ml |

## Kit Contents

- Carbol Fuchsin Kinyoun
- TB Differentiator x 2
- Methylene Blue (AFB)

## General Information

| | |
|---|---|
| Procedure Time | 15 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Acid fast bacilli (M.tuberculosis): | Magenta/red |
| Cells and background material, other organisms: | Blue |

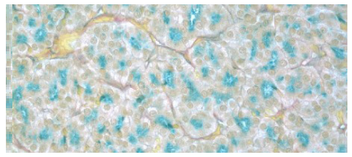
## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water. For smears flood slides with distilled water
2. Flood the slides with carbol fuchsin Kinyoun for 5 minutes
3. Wash well in distilled water
4. Differentiate with TB differentiator until preparation is colourless or pale pink (until no more dye runs out), approximately 3-5 seconds
5. Wash well in distilled water
6. Counterstain with methylene blue (AFB) for 15 seconds
7. Wash well in distilled water
8. Dehydrate rapidly, clear and mount

## Hazard Information

**UN1992**





# Colloidal Iron Stain Kit (Muller)

This stain kit is used for the detection of acid mucopolysaccharides and is based upon the attraction of ferric cations in a colloidal ferric oxide solution for the negatively charged carboxyl and sulfate groups of acid mucins and proteoglycans. The tissue bound ferric ions are visualised by treatment with potassium ferrocyanide to form bright blue de posits of ferric ferrocyanide or prussian blue

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK100 | 5 x 50ml | 5 x 100ml | 5 x 250ml | 5 x 500ml |

## Kit Contents

| | |
|---|---|
| Ferric Chloride 29% aqueous solution | Colloidal Perls Reagent B (5% Potassium Ferrocyanide) |
| Acetic Acid 25% aqueous Solution | Neutral Red 0.5% Aqueous Solution |
| Colloidal Perls Reagent A (5% Hydrochloric Acid) | |

## General Information

| | |
|---|---|
| Procedure Time | 100 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | Store Perls Reagent 2-8°C. Other components 15-25°C |

## Results

| | |
|---|---|
| Proteoglycans, acid mucins, hyaluronic acid: | Bright Blue |
| Collagen: | Pale Blue |
| Nuclei: | Red |

## Working Stock Solution

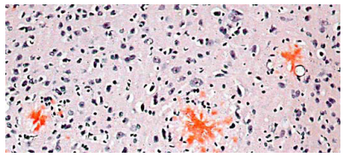
1. Stock Colloidal Iron Solution - Bring 62.5mls of distilled water to the boil and add 1.1ml of the ferric chloride (29%) solution. Continue to boil until the solution turns dark red, at which time the solution should be removed from the heat and cooled. This working solution is stable for 1 year
2. Colloidal Iron Working Solution - Mix 1 part of the stock iron solution with 1 part of the 25% acetic acid solution. Prepare fresh prior to staining
3. Colloidal Perls Working Solution - Mix 1 part of stock Colloidal Perls A with 1 part stock Colloidal Perls B. Mix well and use fresh

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Treat with diluted acetic acid (12% - 1 part of 25% acetic acid to 1 part distilled water) for 1 minute
3. Cover the test slide (not control) with colloidal iron working solution for 1 hour
4. Rinse in diluted acetic acid solution for 3 minutes. Repeat 4 times
5. Place test and control slide in freshly prepared colloidal Perls solution for 20 minutes
6. Rinse briefly in distilled water
7. Stain with 0.5% neutral red solution for 5 minutes
8. Rinse well in water and blot dry
9. Dehydrate quickly, clear and mount

## Hazard Information

**UN1760**



# Congo Red Stain Kit (Highman)

This stain kit is used for the detection of Amyloid Protein in tissue sections. The use of alkaline alcoholic solvents has the effect of supressing staining of other tissue components whilst enhancing hydrogen bonding hence improving selectivity for amyloid. This method has stable solutions and has a high degree of selectivity

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK10 | 3 x 50ml | 3 x 100ml | 3 x 250ml | 3 x 500ml |

## Kit Contents

Congo Red in 50% ethanol

Haemalum Mayer

0.2% Potassium Hydroxide in 80% ethanol

## General Information

| | |
|---|---|
| Procedure Time | 28 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Eosinophils, Amyloid, Elastin,Keratin: | Orange/Red |
| Nuclei: | Blue |

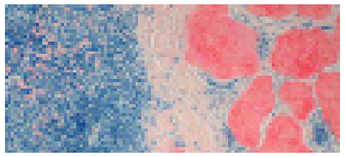
## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Place in congo red Solution for 15 minutes
3. Differentiate in potassium hydroxide Solution for 3-10 seconds
4. Wash in running tap water
5. Stain nuclei with haemalum Mayer for 5 minutes
6. Wash well in water
7. Differentiate in 1% acid alcohol for 2-10 seconds
8. Wash well in water
9. Blue in Scotts tap water
10. Wash well in tap water
11. Dehydrate rapidly, clear and mount

## Hazard Information

**UN1170**





# Congo Red Stain Kit (Puchtler & Sweat)

This stain kit is used for the detection of Amyloid Protein in tissue sections. This method removes the need for a differentiation step with the use of a highly concentrated sodium chloride solution which reduces background staining whilst enhancing hydrogen bonding of Congo Red to Amyloid resulting in a progressive staining and highly selective technique

| | 100 Test | 200 Test |
|---|---|---|
| Code | - 100 | -200 |
| RRSK9 | 12 x 50ml | 12 x 100ml |

## Kit Contents

Saturated Sodium Chloride Alcoholic Solution x 5

Sodium Hydroxide 1% Aqueous Solution

Congo Red in 80% Ethanol Saturated x 5

Haemalum Mayer

## General Information

| | |
|---|---|
| Procedure Time | 60 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Eosinophils, Amyloid, Elastin, Keratin: | Red |
| Various glycoproteins, early lipofuchsins: | Magenta |
| Nuclei: | Blue |

## Protocol

Firstly 2 separate working solutions must be prepared

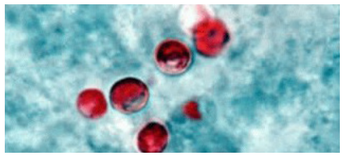
Working Solution A Add 0.25ml sodium hydroxide to 25ml alcoholic sodium chloride. Use promptly

Working Solution B Add 0.25ml sodium hydroxide solution to 25ml congo red solution. Use promptly

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Stain nuclei with Mayers haemalum for 5 mins
3. Wash well in tap water
4. Differentiate with 1% acid alcohol 2-10 secs
5. Wash well in water
6. Blue in scotts tap water
7. Wash well in water
8. Immerse in working solution A for 20 minutes. Drain
9. Immerse in congo red working solution B for 20 minutes
10. Rinse briefly in alcohol (80%)
11. Dehydrate rapidly, clear and mount

## Hazard Information

**UN1170**



# Cryptosporidium Stain Kit

This stain kit is commonly used for staining oocysts of the Cryptosporidium species in foecal smears. It is also useful to confirm the presence of oocysts of Isospora belli and Cyclospora cayetanensis

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK75 | 5 x 50ml | 5 x 100ml | 5 x 250ml | 5 x 500ml |

## Kit Contents

| | |
|---|---|
| Cryptospridium Fixative | Malachite Green 0.5% Aqueous |
| Carbol Fuchsin Kinyoun | |
| TB Differentiator x 2 | |

## General Information

| | |
|---|---|
| Procedure Time | 25 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Oocysts of Cryptosporidium parvum: | Magenta/Red |
| Oocysts of Isospora belli: | Granular Red |
| Oocysts of Cyclospora cayetanensis: | Variable Staining (some are acid fast giving a round hole of glassy wrinkled sphere |

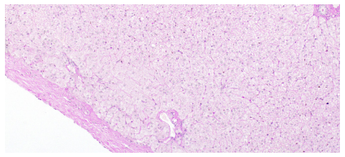
## Protocol

1. Immerse in the Cryptosporidium Fixative for 3 minutes
2. Flood the slides with carbol fuchsin Kinyoun for 20 minutes
3. Wash well in distilled water
4. Differentiate with TB differentiator until preparation is colourless or pale pink (until no more dye runs out), approximately 10 seconds
5. Wash well in distilled water
6. Counterstain with malachite green for 1 minute
7. Wash well in distilled water
8. If oil immersion is to be used for visualisation of smears the preparation must be air dried for 20-30 minutes

## Hazard Information

**UN1922**





# DPAS Stain Kit

This stain kit is used to differentiate glycogen from other PAS-positive elements in tissue sections. Glycogen is removed by enzyme digestion. It is often used in conjunction with the PAS kit

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK150 | 4 x 50ml | 4 x 100ml | 4 x 250ml | 4 x 500ml |

## Kit Contents

| | |
|---|---|
| Lipase from porcine pancreas | Schiff reagents (Feulgen) |
| Periodic Acid Solution 1% | |
| Haemalum Mayer | |

## General Information

| | |
|---|---|
| Procedure Time | 75 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | Schiff reagent & lipase 2-8° C. Other Reagents 15-25° C. |

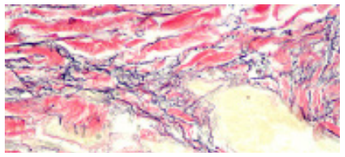
## Results

| | |
|---|---|
| Nuclei: | Blue-Black |
| Glycogen: | No Magenta staining |
| Neutral/sialomucins: | Magenta |
| Various glycoproteins, early lipofuchsins: | Magenta |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Treat with a 1% solution of lipase for 20 minutes at 37°C and then wash well in water
3. Oxidise slides with periodic acid solution for 5 minutes
4. Wash well in several changes of distilled water
5. Stain with schiff reagent for 20 minutes at room temperature
6. Wash slides well in running tap water for 5-10 minutes (sections should macroscopically be pink/magenta in colour)
7. Stain sections in haemalum Mayer for 1 minute
8. Wash well in water, differentiate in 0.5% acid alcohol and blue in running water or Scotts tap water substitute
9. Dehydrate rapidly, clear and mount

## Hazard Information



# Elastic Van Gieson Stain Kit (Miller) (EVG)

This stain kit uses a combined technique to demonstrate elastic fibres, collagen and muscle. Elastic fibres, especially fine fibres will stain intensely blue with the Miller stain. Elastin and pre elastin fibres are highly cross linked disulphide bridges which require oxidation with potassium permanganate followed by a bleach with oxalic acid

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK11 | 6 x 50ml | 6 x 100ml | 6 x 250ml | 6 x 500ml |

## Kit Contents

| | |
|---|---|
| Potassium Permanganate 0.5% Solution x 2 | Millers Elastin Stain |
| Sulphuric Acid 3% Solution | Van Gieson Extra Stain |
| Oxalic Acid 1% Solution | |

## General Information

| | |
|---|---|
| Procedure Time | 195 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Elastic fibres: | Blue/Black |
| Mature Collagen: | Red |
| Other tissues e.g. muscle and red blood cells: | Yellow |

## Protocol

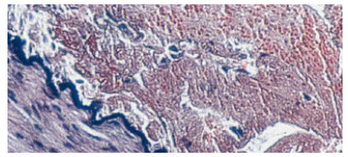
**Preparation of Acidified Potassium Permanganate**
Mix 9.5ml of potassium permanganate solution with 0.5ml of sulphuric acid solution. This purple solution will keep for 3-4 weeks but should be discarded after using 5 times or if it turns brown

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Treat with acidified potassium permanganate for 5 minutes
3. Wash well in water and bleach with oxalic acid for 1 minute
4. Wash well in water
5. Rinse in 95% alcohol (not supplied)
6. Stain in Millers elastin stain for 3 hours at room temperature
7. Rinse briefly in 95% alcohol to remove excess stain
8. Wash well in water
9. Counterstain with Van Gieson stain for 2 minutes
10. Blot Dry
11. Dehydrate rapidly, clear and mount

## Hazard Information

**UN1170**





# Elastic Van Gieson Stain Kit (Verhoeffs) (EVG)

This stain kit is useful in demonstrating elastic fibres, collagen and muscle. Elastin has a high affinity for the iron-haematoxylin stain and hence will retain the dye longer than other tissue components which will be decolourised by the differentiation

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK40 | 7 x 50ml | 7 x 100ml | 7 x 250ml | 7 x 500ml |

## Kit Contents

| | |
|---|---|
| Haematoxylin 5% alcoholic | Lugols Iodine |
| Ferric Chloride 10% solution x 3 | Sodium Thiosulphate 5% Solution |
| Van Gieson Extra | |

## General Information

| | |
|---|---|
| Procedure Time | 45 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Elastic Tissue and Nuclei: | Black |
| Collagen: | Red |
| Other Tissue Elements: | Yellow (or according to counterstain) |

## Working Stock Solution

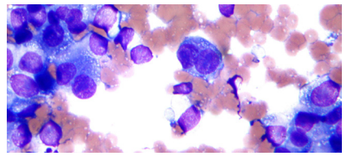
**Solution 1:** Add 1.25ml 5% alcoholic haematoxylin to 0.5ml 10% ferric chloride and mix. Add 0.5ml lugols iodine and mix well. Make fresh
**Solution 2:** Add 5ml of 10% ferric chloride to 20ml of distilled water in a container such as a slide mailer Make fresh every time.

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Stain in solution 1 for 30 minutes (save solution until stain is completed)
3. Wash in tap water
4. Differentiate in solution 2, check microscopically for black fibers on a grey background
5. Rinse in water
6. Treat with sodium thiosulphate for 1 minute to remove staining due to iodine alone
7. Wash in tap water
8. Counterstain in Van Gieson Stain for 2 minutes
9. Blot to remove excess stain
10. Dehydrate rapidly, clear and mount

## Hazard Information

**UN2924**



# Fields Stain Kit

This stain kit is used for the detection of malarial parasites in blood films. Fields Stain is one of the original Romanowsky stains using methylene blue in a weak solution of eosin. With some modifications it can be used fairly satisfactorily for the rapid staining of thin blood films

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK25 | 3 x 50ml | 3 x 100ml | 3 x 250ml | 3 x 500ml |

## Kit Contents

Fields Stain A (Aqueous Methylene Blue Solution A)

Fields Stain B (Aqueous Eosin Y Solution B)

Sorensens Buffer 200 x Concentrate pH 6.8 25ml to make 5L

## General Information

| | |
|---|---|
| Procedure Time | 35 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Malarial Parasites | Blue/Purple |

## Working Stock Solution

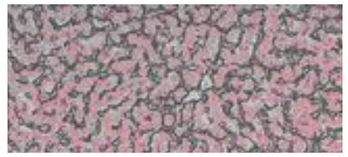
Mix 1 volume of stain B (eosin y) to 4 volumes of distilled water. Take 12 drops of the above diluted stain and add 12 drops of Stain A (methylene blue) and mix together before use

## Protocol

1. Place fixed smear on staining rack and add freshly prepared stain (as above) for 1 minute
2. Rinse in distilled water
3. Differentiate the smear in Sorensens buffer (25ml diluted to 5L with distilled water) pH 6.8 for 5 seconds
4. Rinse in distilled water for 2-3 seconds
5. Stand upright on filter paper to drain and dry and if required dip the dry smear in xylene and mount

## Hazard Information





# Gomori Reticulin Stain Kit

This stain kit is a metal impregnation technique used to demonstrate reticulin fibres providing contrast which enables even the finest of fibres to be seen

| | 100 Test | 200 Test |
|---|---|---|
| Code | - 100 | -200 |
| RRSK800 | 14 x 50ml | 14 x 100ml |

## Kit Contents

| | |
|---|---|
| Potassium Hydroxide 10% | Formaldehyde 10% Solution (unbuffered) |
| Ammonia 33% Solution | Gold Chloride 0.2% Solution |
| Silver Nitrate 10% Solution x 2 | Oxalic Acid 1% Solution |
| Potassium Permanganate 0.5% Solution x 2 | Sodium Thiosulphate 2% Solution |
| Ferric Ammonium Sulphate 2% Solution (iron Alum) | Van Gieson Extra Stain |
| Potassium Metabisulphite 2% Solution | Sulphuric Acid 3% Solution |

## General Information

| | |
|---|---|
| Procedure Time | 50 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | Silver Nitrate 2-8°C. Other Reagents 15-25° C |

## Results

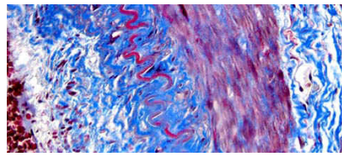
| | |
|---|---|
| Reticulin fibres: | Black |
| Nuclei: | Grey/Black |
| Collagen: | Red |
| Other Tissue: | Yellow |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Oxidise the sections in acidified potassium permanganate solution for 5 minutes, wash well in tap water
3. Decolourise in 1% oxalic acid solution for 1 minute, wash in tap water
4. Mordant sections in ferric ammonium sulphate solution for 2 minutes. Wash well with several changes of distilled water
5. Treat with filtered ammoniacal silver solution for 1 minute. Wash well with several changes of distilled water
6. Reduce in 10% formalin solution for 1 minute, check microscopically and if under impregnated repeat steps 8-10. Wash in tap water
7. Tone in 0.2% gold chloride solution for 10 minutes, rinse in tap water
8. Treat sections with 2% potassium metabisulphite solution for 1 minute, rinse in tap water
9. Treat with 2% sodium thiosulphate solution for 1 minute, rinse in tap water
10. Counterstain with Van Gieson for 3 minutes and blot dry

## Hazard Information

**UN3316**



# Gomori Trichrome Stain Kit

This stain kit is used in the demonstration of connective tissue. It is a one step trichrome stain and can be used to differentiate between collagen and smooth muscle fibres

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK70 | 6 x 50ml | 6 x 100ml | 6 x 250ml | 6 x 500ml |

## Kit Contents

| | |
|---|---|
| Bouins saturated aqueous Solution | Acid Alcohol 0.5% Solution |
| Haematoxylin Weigerts A | Gomori Stain |
| Haematoxylin Weigerts B | Glacial Acetic Acid 0.5% Aqueous |

## General Information

| | |
|---|---|
| Procedure Time | 120 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Nuclei: | Blue/Black |
| Cytoplasm, keratin, muscle fibres: | Red |
| Collagen and mucus: | Green |

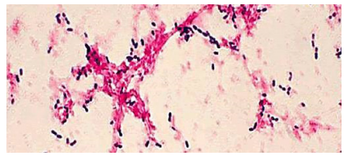
## Protocol

1. Prepare Weigert Haematoxylin by mixing equal volumes of solution A & B as required
2. Dewax sections, hydrate through alcohols and rinse in tap water
3. Rinse well in distilled water
4. Place sections in Bouins solution for 1 hour at 56 ° C
5. Remove slides and allow to cool to room temperature, wash well in running tap water until all the yellow colour disappears
6. Rinse well in distilled water
7. Stain nuclei with Weigerts iron haematoxylin for 20 minutes
8. Wash in water and differentiate in 0.5% acid alcohol solution, leaving the nuclei slightly overstained
9. Rinse in running tap water
10. Stain with Gomoris trichrome for 15-20 minutes
11. Rinse sections in 0.5% acetic acid and blot dry
12. Dehydrate, clear and mount

## Hazard Information

**UN1170**





# Gram Stain Kit (Gram Fuchsin Counterstain)

This stain kit is used to demonstrate Gram Positive and Gram Negative Micro-organisms. The main principle of the technique is the increased thickness, chemical composition and functional integrity of the cell walls of gram positive bacteria, which when they die become gram negative

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK3 | 5 x 50ml | 5 x 100ml | 5 x 250ml | 5 x 500ml |

## Kit Contents

| | |
|---|---|
| Crystal Violet (0.5% Aqueous) | Gram Fuchsin (Carbol Fuchsin) |
| Grams Iodine | |
| Gram Differentiator x 2 | |

## General Information

| | |
|---|---|
| Procedure Time | 18 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

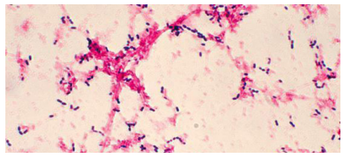
| | |
|---|---|
| Gram Positive Organisms: | Blue/Black |
| Gram Negative Organisms: | Red/Pink |
| Nuclei | Red/Pink |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water. For smears flood slides with distilled water
2. Stain with crystal violet for 3 minutes (filter before use)
3. Rinse well in distilled water
4. Treat slides with Grams iodine for 3 minutes
5. Wash well in distilled water, drain
6. Differentiate with Grams differentiator until no more colour comes out of the preparation. (1-5 seconds). Rinse off quickly, sections will be straw coloured
7. Wash well in water
8. Counterstain with Gram fuchsin 1 minute
9. Wash in water and blot dry (for smears allow to dry)
10. Dehydrate, clear and mount

## Hazard Information

**UN1993**



# Gram Stain Kit (Hucker & Conn)

This stain kit is used to demonstrate Gram Positive and Gram Negative Micro-organisms. The main principle of the technique is the increased thickness, chemical composition and functional integrity of the cell walls of gram positive bacteria, which when they die become gram negative

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK200 | 5 x 50ml | 5 x 100ml | 5 x 250ml | 5 x 500ml |

## Kit Contents

| | |
|---|---|
| Crystal Violet Hucker & Conn | Safranin 0.5% aqueous |
| Grams Iodine | |
| Gram Differentiator x 2 | |

## General Information

| | |
|---|---|
| Procedure Time | 20 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Gram Positive Bacteria and Fungi: | Dark Blue/Violet |
| Gram Negative Bacteria: | Red |

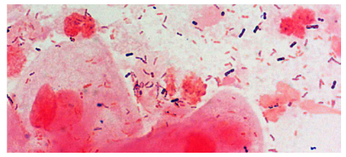
## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water. For smears flood slides with distilled water
2. Apply crystal violet solution and leave for 2-3 minutes
3. Wash with water
4. Apply Grams iodine and leave for 2-3 minutes
5. Apply several changes of Grams differentiator until no more colour appears to flow from preparation
6. Wash well in water
7. Apply Safranin for 4 minutes
8. Wash in water and blot dry . For smears allow to dry
9. Dehydrate, clear and mount

## Hazard Information

**UN1993**





# Gram Stain Kit (Neutral Red Counterstain)

This stain kit is used to demonstrate Gram Positive and Gram Negative Micro-organisms. The main principle of the technique is the increased thickness, chemical composition and functional integrity of the cell walls of gram positive bacteria, which when they die become gram negative

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK5 | 5 x 50ml | 5 x 100ml | 5 x 250ml | 5 x 500ml |

## Kit Contents

| | |
|---|---|
| Crystal Violet (0.5% Aqueous) | Neutral Red (0.1% solution) |
| Grams Iodine | |
| Gram Differentiator x 2 | |

## General Information

| | |
|---|---|
| Procedure Time | 18 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

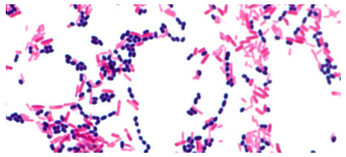
| | |
|---|---|
| Gram Positive Organisms: | Blue/Black |
| Gram Negative Organisms: | Red |
| Nuclei: | Red |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water. For smears flood slides with distilled water
2. Stain with crystal violet for 3 minutes (filter before use)
3. Rinse well in distilled water
4. Treat slides with Grams iodine for 3 minutes
5. Wash well in distilled water, drain
6. Differentiate with Grams differentiator until no more colour comes out of the preparation. (1-5 seconds) Rinse off quickly, sections will be straw coloured
7. Wash well in water
8. Counterstain with neutral red for 1 minute
9. Wash in water and blot dry (for smears allow to dry)
10. Dehydrate rapidly, clear and mount

## Hazard Information

**UN1993**



# Gram Stain Kit (Safranin Counterstain)

This stain kit is used to demonstrate Gram positive and Gram negative micro-organisms. The main principle of the technique is the increased thickness, chemical composition and functional integrity of the cell walls of Gram positive bacteria, which when they die become Gram negative

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK4 | 5 x 50ml | 5 x 100ml | 5 x 250ml | 5 x 500ml |

## Kit Contents

| | |
|---|---|
| Crystal Violet (0.5% Aqueous) | Safranin (0.5% Aqueous) |
| Grams Iodine | |
| Gram Differentiator x 2 | |

## General Information

| | |
|---|---|
| Procedure Time | 18 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Gram Positive Organisms: | Blue/Black |
| Gram Negative Organisms: | Red |
| Nuclei: | Red |

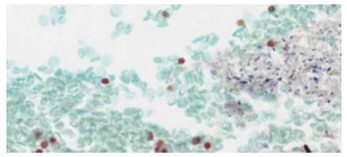
## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water. For smears flood slides with distilled water
2. Stain with crystal violet for 3 minutes (filter before use)
3. Rinse well in distilled water
4. Treat slides with Grams iodine for 3 minutes
5. Wash well in distilled water, drain
6. Differentiate with Grams differentiator until no more colour comes out of the preparation. (1-5 seconds) Rinse off quickly, sections will be straw coloured
7. Wash well in water
8. Counterstain with safranin for 1 minute
9. Wash in water and blot dry (for smears allow to dry)
10. Dehydrate, clear and mount

## Hazard Information

**UN1993**





# Gram Stain Kit (Twort Counterstain)

This stain kit is used to demonstrate Gram Positive and Gram Negative Micro-organisms. The main principle of the technique is the increased thickness, chemical composition and functional integrity of the cell walls of gram positive bacteria, which when they die become gram negative

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK45 | 6 x 50ml | 6 x 100ml | 6 x 250ml | 6 x 500ml |

## Kit Contents

| | |
|---|---|
| Crystal Violet (0.5% Aqueous) | Twort Solution A ( 0.2% Neutral Red in IMS) |
| Grams Iodine | Twort Solution B (0.2% Fast Green in IMS) |
| Gram Differentiator x 2 | |

## General Information

| | |
|---|---|
| Procedure Time | 18 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

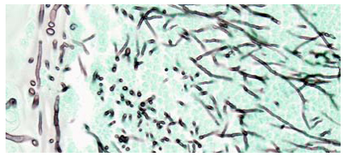
| | |
|---|---|
| Gram Positive Organisms: | Blue/Black |
| Gram Negative Organisms: | Red/Pink |
| Nuclei: | Red/Pink |
| Red Blood Cells and most cytoplasmic structures: | Green |
| Elastic Fibres: | Black |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water. For smears flood slides with distilled water
2. Stain with crystal violet for 3 minutes (filter before use)
3. Rinse well in distilled water
4. Treat slides with Grams iodine for 3 minutes
5. Wash well in distilled water, drain
6. Differentiate with Grams differentiator until no more colour comes out of the preparation. (1-5 seconds) Rinse off quickly, sections will be straw coloured
7. Immediately wash well in water
8. Mix Twort stain A&B (Twort working solution) immediately before use, as follows: solution A (0.2% neutral red) 9 parts, solution B (0.2% fast green) 1 part, distilled water 30 parts. Stain with the working solution for 3 minutes
9. Wash in water, blot dry and allow to air dry
10. Dehydrate rapidly, clear and mount

## Hazard Information

**UN1993**



# Grocott Stain Kit

This stain kit is used to demonstrate fungi, basement membrane and some other organisms (e.g. Pneumocystis Carnii and histoplasma)

| | 100 Test | 200 Test |
|---|---|---|
| Code | - 100 | -200 |
| RRSK80 | 11 x 50ml | 11 x 100ml |

## Kit Contents

| | |
|---|---|
| Chromic Acid 5% Solution x 2 | Sodium Metabisulphite 1% Solution |
| Hexamine (Methanamine) 3% Solution x 2 | Gold Chloride 0.1% Solution |
| Silver Nitrate 5% Solution | Sodium Thiosulphate 2% Solution |
| Sodium Tetraborate 5% Solution x 2 | Light Green (0.2% in 0.2% Acetic Acid) |

## General Information

| | |
|---|---|
| Procedure Time | 105 minutes (post warming of working solution) (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | Silver Nitrate 2-8 ° C. Other reagents 15-25 ° C |

## Results

| | |
|---|---|
| Fungi, pneumocystis, melanin, Basement Membrane: | Black |
| Mucins, Glycogen: | Beige/Grey |
| Background: | Pale Green |

## Working Stock Solution

Hexamine-Silver Working solution:
In a chemically clean container measure 23ml of hexamine and 1.25ml of 5% silver nitrate. A white precipitate forms which will dissolve on shaking
Add 3ml of 5% sodium tetraborate and 25ml of distilled water. Make fresh every time.
Filter the solution into a Coplin jar and put into an oven or water bath at 56°C in darkness. Check temperature of solution before starting

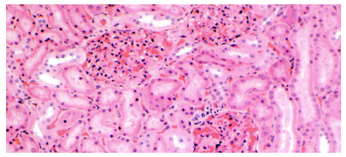
## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water. For smears flood slides with distilled water
2. Oxidise the sections with chromic acid for 60 minutes at room temperature
3. Rinse in distilled water
4. Treat sections with sodium metabisulphite solution for 1 minute
5. Wash well in running tap water and then in several changes of distilled water
6. Stain sections in the pre-heated working silver solution at 56°C for 15 to 20 mins until section turns yellowish-brown (check microscopically after washing in distilled water – fungi should be dark brown). If staining not complete return to the heated silver solution for 2-3 minutes and repeat the examination process
7. Wash in several changes of distilled water
8. Tone sections with gold chloride for 5 minutes
9. Wash in several changes of distilled water
10. Treat with sodium thiosulphate for 5 minutes
11. Wash in distilled water and counterstain in light green solution for 30 secs
12. Dehydrate, clear and mount

## Hazard Information

**UN3082**





# Haematoxylin & Eosin Stain Kit (H&E)

This stain kit demonstrates all tissue structures. The haematoxylin (alum) Harris' stains the nuclei blue/black and the eosin stains cell cytoplasm and most connective tissue fibres in varying shades and intensity from pink to red

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK26 | 4 x 50ml | 4 x 100ml | 4 x 250ml | 4 x 500ml |

## Kit Contents

| | |
|---|---|
| Haematoxylin Harris | Scotts Tap Water |
| Eosin Y 1% Aqueous | |
| Acid Alcohol 0.5% | |

## General Information

| | |
|---|---|
| Procedure Time | 35 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

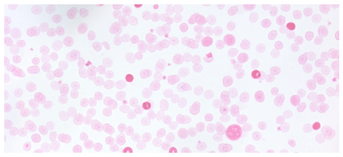
| | |
|---|---|
| Nuclei: | Blue/Black |
| Cytoplasm: | Varying shades of pink |
| Muscle Fibres: | Deep Pink/Red |
| Red Blood Cells: | Orange/Red |
| Fibrin: | Deep Pink |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Stain in filtered Harris' haematoxylin for 10 minutes
3. Wash well in running tap water
4. Differentiate in 0.5% acid alcohol for 5-10 seconds
5. Wash well in running water
6. Blue in Scotts tap water
7. Wash well in water (if Scotts tap water used)
8. Stain in 1% eosin Y for 10 minutes
9. Wash in running tap water 1-5 minutes
10. Dehydrate, clear and mount

## Hazard Information

**UN1770**



# Kleihauer Stain Kit

This stain kit is used to detect foetal cells in a maternal circulation and is based upon the ability of foetal cells to withstand acid pH whereas adult red cells undergo elution of the haemoglobin

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK33 | 8 x 50ml | 8 x 100ml | 8 x 250ml | 8 x 500ml |

## Kit Contents

| | |
|---|---|
| Kleihauer Buffer Solution 1 x 3 | Haemalum Mayer |
| Kleihauer Buffer Solution 2 x 2 | Denatured Ethanol 80% |
| Erythrosin 0.1% Acidified Solution | |

## General Information

| | |
|---|---|
| Procedure Time | 45 minutes (post warming of working solution) (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Foetal cells: | Reddish brown |
| Adult cells: | Pale pink ghost outlines |
| Neutrophils: | Appear differentiated as in haematology films |
| Lymphocytes: | Grey/Pink |

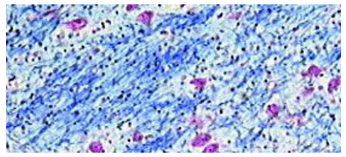
## Protocol

1. Following preparation, allow blood smears to air-dry for 10-60 minutes
2. Place the dry blood smears in a coplin jar containing the denatured ethanol 80% for approximately 5 minutes.
3. Rinse in distilled water and allow to air dry
4. Place the slides in the Kleihauer buffer solution (pre heated to 37° C in a Coplin jar) for 5 minutes. Agitate the slides at 2 minute intervals
5. Rinse with distilled water and air dry
6. Stain with the haemalum Mayer for 3 minutes
7. Rinse with distilled water
8. Stain with the erythrosin solution for 4 minutes
9. Rinse with distilled water and allow to air dry
10. Slides must be examined using oil immersion

## Hazard Information

**UN1170**





# Luxol Fast Blue Stain Kit

This stain kit is used to demonstrate the presence of normal myelin. When combined with a cresyl violet counterstain myelin and nissl substances are demonstrated

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK345 | 5 x 50ml | 5 x 100ml | 5 x 250ml | 5 x 500ml |

## Kit Contents

| | |
|---|---|
| Luxol Fast Blue 0.1% in Acidified Methanol | Lithium Carbonate Solution 0.05% |
| Cresyl Violet 0.5% Aqueous Solution | Denatured Ethanol 70% |
| Cresyl Violet Differentiator (IMS 99%) | |

## General Information

| | |
|---|---|
| Procedure Time | 140 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

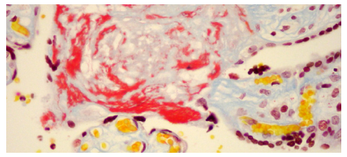
| | |
|---|---|
| Myelin: | Blue/Green |
| Nuclei, Nissl Substances: | Violet/Pink |

## Protocol

1. Dewax sections and hydrate to 95% alcohol. Do not rinse.
2. Stain in luxol fast blue solution for 2 hours at 60 ° C or at 37°C overnight
3. Wash in 70% denatured ethanol for 2-3 seconds to remove excess stain
4. Wash in tap water
5. Differentiate using lithium carbonate solution until the grey and white matter are distinguished
6. Wash in tap water
7. Check differentiation under the microscope. Repeat step 5 if necessary
8. Stain in cresyl violet solution for 10-12 minutes
9. Wash in tap water
10. Differentiate in cresyl violet differentiator for 4-8 seconds
11. Check differentiation under microscope (only look at nissl substances and nuclei)
12. Dehydrate, clear and mount

## Hazard Information

**UN1992**



# Martius Scarlet Blue Stain Kit (MSB)

This stain kit allows the differentiation of fibrin, collagen and muscle. Early fibrin and red blood cells are also demonstrated with this technique

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK2 | 6 x 50ml | 6 x 100ml | 6 x 250ml | 6 x 500ml |

## Kit Contents

| | |
|---|---|
| Martius Yellow Sat. Alcoholic with 2% Phosphotungstic Acid | Aniline Blue (1% aqueous) |
| Phosphotungstic Acid 1% Solution | Haematoxylin Weigerts (Solution B) |
| Haematoxylin Weigerts (Solution A) | |
| Brilliant Crystal Scarlet | |

## General Information

| | |
|---|---|
| Procedure Time | 45 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Fibrin: | Red (early fibrin may stain yellow and old fibrin blue) |
| Muscle: | Pale red |
| Nuclei: | Blue/black |
| Collagen; basement membranes; reticulin: | Blue |
| Elastic fibres: | Blue |
| Erythrocytes: | Yellow |

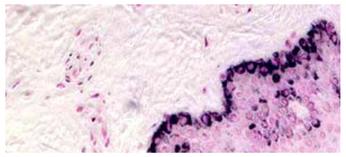
## Protocol

1. Prepare fresh Weigert haematoxylin by mixing equal volumes of solution A & B as required
2. Dewax sections, hydrate through alcohols and rinse in tap water
3. Stain nuclei with Weigerts iron haematoxylin for 10 minutes
4. Wash quickly in water and differentiate in 1% acid alcohol solution (RRSP187 - not supplied), leaving the nuclei slightly overstained
5. Wash well in running tap water and then Blue in water or Scotts tap water
6. Wash well in running water
7. Rinse in 95% alcohol (not supplied)
8. Stain with martius yellow solution for 5 minutes
9. Wash quickly in running tap water
10. Stain with crystal scarlet solution for 5 minutes
11. Wash in running tap water
12. Treat with phosphotungstic acid solution for 10 minutes, check microscopically. Treat for a further 5 minutes if necessary
13. Wash in running tap water
14. Stain with aniline blue solution for 5 minutes
15. Wash in tap water
16. Dehydrate, clear and mount

## Hazard Information

**UN1170**





# Masson Fontana Stain Kit

This stain kit is used to demonstrate melanin in tissue but can also demonstrate argentaffin cell granules and lipofuscins.

| | 100 Test | 200 Test |
|---|---|---|
| Code | - 100 | -200 |
| RRSK12 | 7 x 50ml | 7 x 100ml |

## Kit Contents

| | |
|---|---|
| Ammonia Solution 33% | Neutral Red 0.1% Solution |
| Silver Nitrate 10% Solution x 4 | |
| Sodium Thiosulphate 5% Solution | |

## General Information

| | |
|---|---|
| Procedure Time | 60 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | Store silver nitrate at 2-8°C for optimal performance |

## Results

| | |
|---|---|
| Melanin: | Black |
| Argentaffin cell granules, chromaffin, some lipofuchsins: | Black |
| Nuclei: | Red |

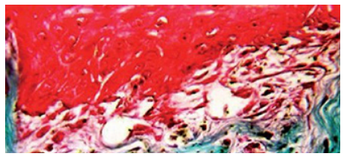
## Protocol

PREPARATION OF AMMONIACAL SILVER SOLUTION - Place 20ml of 10% aqueous silver nitrate solution in a glass flask. Using a fine-pointed dropper pipette, add concentrated ammonia drop by drop, constantly agitating the flask until the formed precipitate almost dissolves
- This titration is critical if the method is to work consistently well
- The end point of the titration is seen when a faint opalescence is present, and is best viewed using reflected light against a black background
- If too much ammonia is inadvertently added then the addition of a few drops of 10% silver nitrate will restore the opalescence
- To this correctly titrated solution add 20ml triple distilled water and then filter into a dark bottle
- Ammoniacal silver solutions are potentially explosive if stored incorrectly
- Store the solution in the refrigerator (2-8°C) and use within 4 weeks

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Wash well in distilled water
3. Treat with the ammoniacal silver solution in a clean Coplin jar, which has been covered with aluminium foil, for 30-40 minutes at 56˚C. Check microscopically until optimum staining is achieved
4. Wash well in several changes of distilled water
5. Treat sections with 5% aqueous sodium thiosulphate (hypo) for 1 minute
6. Wash well in running tap water for 2-3 minutes
7. Counterstain in 0.1% Neutral Red for 1 minute
8. Rinse in running water and blot dry
9. Dehydrate rapidly, clear and mount

## Hazard Information

**UN2672**



# Masson Trichrome (Light Green) Stain Kit

This stain kit is used to demonstrate connective tissues. Three dyes are used, each with different selectivity for muscle, collagen fibres and erythrocytes hence the term 'trichrome' staining

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK21 | 5 x 50ml | 5 x 100ml | 5 x 250ml | 5 x 500ml |

## Kit Contents

| | |
|---|---|
| Haematoxylin Weigerts (Solution A) | Ponceau Fuchsin Masson Solution |
| Haematoxylin Weigerts (Solution B) | Light Green Masson (2% Light Green in 2.5% Acetic Acid) |
| Phosphotungstic Acid 1% Solution | |

## General Information

| | |
|---|---|
| Procedure Time | 50 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Nuclei: | Blue-Black |
| Cytoplasm, Neuroglia fibres and Muscle: | Red |
| Collagen and Mucus: | Green |

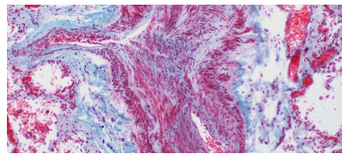
## Protocol

1. Prepare Weigert haematoxylin by mixing equal volumes of solution A & B as required
2. Dewax sections, hydrate through alcohols and rinse in tap water
3. Stain nuclei with Weigert's iron haematoxylin for 20 minutes, wash quickly in water and differentiate in 1% acid alcohol solution (RRSP175 - not supplied), leaving the nuclei slightly overstained
4. Rinse and blue in water
5. Rinse and stain with ponceau fuchsin masson solution for 5 minutes. Rinse in deionised water
6. Differentiate and mordant in phosphotungstic acid for 15 minutes
7. Transfer without rinsing to the light green solution for 3 minutes
8. Rinse in water
9. Dehydrate, clear and mount

## Hazard Information

**UN1170**





# Masson Trichrome (Methyl Blue) Stain Kit

This stain kit is used to demonstrate connective tissues. Three dyes are used, each with different selectivity for muscle, collagen fibres and erythrocytes hence the term 'trichrome' staining

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK20 | 5 x 50ml | 5 x 100ml | 5 x 250ml | 5 x 500ml |

## Kit Contents

| | |
|---|---|
| Haematoxylin Weigerts (Solution A) | Ponceau Fuchsin Masson Solution |
| Haematoxylin Weigerts (Solution B) | 2% Methyl Blue in 2.5% Acetic Acid |
| Phosphotungstic Acid 1% Solution | |

## General Information

| | |
|---|---|
| Procedure Time | 50 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25°C |

## Results

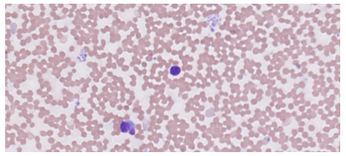
| | |
|---|---|
| Nuclei: | Blue/Black |
| Cytoplasm, Neuroglia fibres and Muscle: | Red |
| Collagen and Mucus: | Blue |

## Protocol

1. Prepare Weigert haematoxylin by mixing equal volumes of solution A & B as required
2. Dewax sections, hydrate through alcohols and rinse in tap water
3. Stain nuclei with Weigert's iron haematoxylin for 20 minutes, wash quickly in water and differentiate in in 1% acid alcohol solution (RRSP175 - not supplied), leaving the nuclei slightly overstained
4. Rinse and blue in water
5. Rinse and stain with ponceau fuchsin solution for 5 minutes. Rinse in deionised water
6. Differentiate and mordant in phosphotungstic acid for 15 minutes
7. Transfer without rinsing to methyl blue solution for 5 minutes
8. Rinse in water
9. Dehydrate, clear and mount

## Hazard Information

**UN1170**



# May Grünwald Giemsa Stain Kit

This stain kit is used for the differential staining of cellular elements of blood. Giemsa and May Grunwald staining solutions are classified as "Romanowsky" stains. These compound dyes are relatively insoluble in water and are usually prepared by solubilisation in Methanol

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK27 | 3 x 50ml | 3 x 100ml | 3 x 250ml | 3 x 500ml |

## Kit Contents

May Grünwald Stain

Giemsa Stain

Sorensens Buffer (200x conc) pH6.8

## General Information

| | |
|---|---|
| Procedure Time | 35 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Nuclei: | Red/Purple |
| Cytoplasm -Lymphocytes/ Monocytes: | Pale Blue |
| Granules in Neutrophils: | Red/Purple |
| Basophil granules: | Blue/Black |
| Eosinophil granules: | Bright Orange |
| Red blood cells: | Pink/Orange |

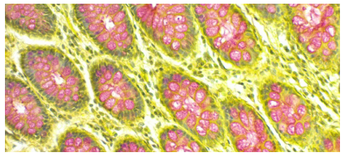
## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water. For smears flood slides with distilled water
2. Filter May Grünwald stain, dilute with Sorensens buffer 1:1 and stain for 15 minutes
3. Tip off stain but do not rinse in buffer
4. Filter Giemsa stain and dilute 1 part stain to 9 parts buffer and stain for 10 minutes
5. Rinse in Sorensens buffer pH 6.8
6. Dehydrate, clear and mount. For smears mount when air dried.

## Hazard Information

**UN1230**





# Mucicarmine Southgate Stain Kit

This stain kit is used for the demonstration of acid mucins. The active dye molecule is aluminium carminic acid complex known as carmine (Lillie 1977). The exact mechanism is not fully understood but it is believed that aluminium salts form a chelate complex with carminic acid which confers an overall positive charge on the carmine complex attracting sialomucins and sulfomucins and thus staining them whilst neutral mucins do not stain

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK13 | 4 x 50ml | 4 x 100ml | 4 x 250ml | 4 x 500ml |

## Kit Contents

| | |
|---|---|
| Mucicarmine (Southgate) | Haemalum Mayer |
| Scotts Tap Water Substitute | |
| Martius Yellow Saturated Alcoholic | |

## General Information

| | |
|---|---|
| Procedure Time | 45 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | Mucicarmine 2-8 ° C. Other Reagents 15-25 ° C |

## Results

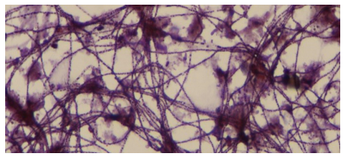
| | |
|---|---|
| Carboxylated mucins, sulphomucins: | Red |
| Nuclei: | Blue/Black |
| Background Tissue: | Yellow |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water.
2. Stain nuclei with Mayer's haemalum for 5 minutes
3. Wash well in water
4. Differentiate in 0.5% acid alcohol and blue in Scotts tap water substitute or running tap water Nuclei should be blue/black when checked microscopically
5. Stain within mucicarmine solution for 30 minutes
6. Rinse well in distilled water
7. Counterstain with martius yellow solution 30 secs
8. Rinse quickly in distilled water
9. Dehydrate, clear and mount

## Hazard Information

**UN1170**



# Neisser Stain Kit

This stain kit is used to demonstrate certain strains of filamentous bacteria in tissue sections and/or smears. The method can demonstrate the Bio-P bacteria responsible for biological phosphate removal

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK62 | 4 x 50ml | 4 x 100ml | 4 x 250ml | 4 x 500ml |

## Kit Contents

| | |
|---|---|
| Neisser Stain A (Methylene Blue Solution) | Neisser Stain D (Chrysoidine Solution) |
| Neisser Stain B (Crystal Violet Solution) | |
| Neisser Stain C (Iodine Solution) | |

## General Information

| | |
|---|---|
| Procedure Time | 5 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

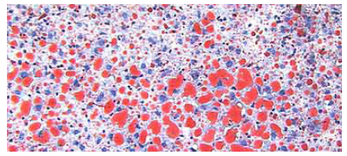
| | |
|---|---|
| Positive Organisms: | Blue/Black |
| Negative Organisms: | Yellow/Brown |

## Protocol

1. Wash slides with distilled water
2. Mix 2 parts of Neisser stain A with 1 part Neisser stain B and flood slides with the stain mixture for 20-30 seconds
3. Rinse gently in distilled water
4. Stain slides with Neisser stain C for 5 seconds
5. Rinse gently in distilled water
6. Stain in Neisser stain D for 10 seconds
7. Rinse and blot dry
8. Use usual method of viewing microscopically e.g oil immersion

## Hazard Information





# Oil red O Stain Kit

This stain kit is used to demonstrate hydrophobic lipids especially neutral fats in tissue. In order to penetrate the fats the dye must be dissolved in organic solvents, the solvent must be sufficiently dilute (aqueous) to avoid extracting the lipids into the solution. The most widely used solvent is isopropyl alcohol (isopropanol/IPA). Also, the tissue once stained, can be shown by polarised light to demonstrate birefringement cholesterol

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK14 | 4 x 50ml | 4 x 100ml | 4 x 250ml | 4 x 500ml |

## Kit Contents

| |
|---|
| Saturated Oil Red O Stain in Isopropyl Alcohol |
| Haemalum Mayer |
| Isopropyl Alcohol 70% x 2 |

## General Information

| | |
|---|---|
| Procedure Time | 20 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25°C |

## Results

| | |
|---|---|
| Unsaturated hydrophobic lipids (ie cerebrosides, triglycerides, chlolesterol esters): | Red |
| Phospholipids: | Pink |
| Nuclei: | Blue |

## Working Stock Solution

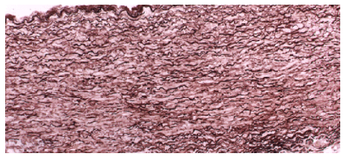
Working Solution: Add 4 parts distilled water to 6 parts oil red O stain. Mix well and stand for 10 minutes, filter before use. Use immediately after filtration

## Protocol

1. Wash slides with distilled water
2. Rinse with 70% isopropyl alcohol to clear background
3. Stain with freshly prepared oil red O working solution 15 mins
4. Rinse briefly with 70% isopropyl alcohol. Carefully rinse in distilled water
5. Lightly stain nuclei with alum haematoxylin for 10 seconds
6. Rinse with distilled water and blue
7. Mount in aqueous mountant or examine under immersion oil

## Hazard Information

**UN1219**



# Orcein Elastic Stain Kit

This stain kit can be used to demonstrate elastic fibres in tissue sections; recommended for vascular pathology

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK91 | 7 x 50ml | 7 x 100ml | 7 x 250ml | 7 x 500ml |

## Kit Contents

| | |
|---|---|
| Orcein solution (1% Orcein in 1% acid alcohol) | Oxalic Acid 1% Solution |
| Potassium Permanganate 0.5% Solution x 2 | Denatured Ethanol 70% |
| Sulphuric Acid 3% Solution | Acid Alcohol 1% |

## General Information

| | |
|---|---|
| Procedure Time | 140 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25°C |

## Results

| | |
|---|---|
| Hepatitis B surface antigen: | Brown granules in cytoplasm |
| Elastic Fibres: | Brown |
| Copper associated protein: | Dark Brown/Purple |
| Background: | Pale Pink/Brown |

## Protocol

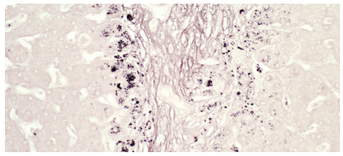
Preparation of Acidified Potassium Permanganate
Mix 9.5ml of potassium permanganate solution with 0.5ml of sulphuric acid solution. This purple solution will keep for 3-4 weeks but should be discarded after using 5 times or if it turns brown

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Oxidise sections with acidified potassium permanganate for 5 minutes
3. Wash well in water
4. Bleach with 1% oxalic acid for 1 minute
5. Wash well in water
6. Rinse sections in 70% denatured ethanol
7. Stain in orcein solution for 2 hours at 37°C
8. Rinse in water then 70% denatured ethanol. If there is a brown background (in collagen and nuclei) differentiate in 1% acid alcohol - a few seconds only are required
9. Dehydrate, clear and mount

## Hazard Information

**UN1170**





# Orcein Shikata Stain Kit (for HbAg in tissue)

This stain kit is a popular for staining hepatitis B surface antigen and copper associated protein commonly found in diseases such as Wilson's disease and chronic biliary disease

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK29 | 6 x 50ml | 6 x 100ml | 6 x 250ml | 6 x 500ml |

## Kit Contents

| | |
|---|---|
| Orcein solution (1% Orcein in 1% acid alcohol) | Oxalic Acid 1% Solution |
| Potassium Permanganate 0.5% solution x 2 | Denatured Ethanol 70% |
| Sulphuric Acid 3% Solution | |

## General Information

| | |
|---|---|
| Procedure Time | 140 minutes (post warming of working solution) (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 ° C |

## Results

| | |
|---|---|
| Hepatitis B surface antigen: | Brown granules in cytoplasm |
| Elastic Fibres: | Brown |
| Copper associated protein: | Dark Brown/Purple |
| Background: | Pale Pink/Brown |

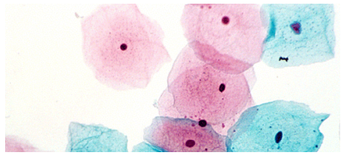
## Protocol

Preparation of Acidified Potassium Permanganate
Mix 9.5ml of potassium permanganate solution with 0.5ml of sulphuric acid solution. This purple solution will keep for 3-4 weeks but should be discarded after using 5 times or if it turns brown

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Oxidise sections with acidified potassium permanganate for 5 minutes
3. Wash well in water
4. Bleach with 1% oxalic acid for 1 minute
5. Wash well in water
6. Rinse sections in 70% denatured ethanol
7. Stain in orcein solution for 2 hours at 56°C
8. Rinse in water then 70% denatured ethanol
9. Dehydrate, clear and mount

## Hazard Information

**UN1170**



# Papanicolaou Stain Kit

This stain kit is used for the demonstration of gynaecological cells in cytological preparations

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK28 | 3 x 50ml | 3 x 100ml | 3 x 250ml | 3 x 500ml |

## Kit Contents

- Papanicolau EA50
- Papanicolau OG6
- Haematoxylin Harris

## General Information

| | |
|---|---|
| Procedure Time | 35 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25°C |

## Results

| | |
|---|---|
| Nuclei: | Blue/Black |
| Cytoplasm (Non-keratinising squamous cells): | Blue/Green |
| Keratonising Cells: | Pink/Orange |

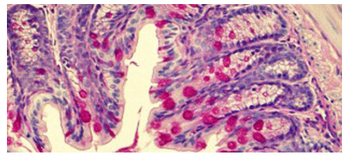
## Protocol

1. Wash slides with 50% alcohol for 1 minute
2. Rinse in tap water, 15 dips
3. Immerse in solution (Haematoxylin), until nuclei are blue, or for 5 minutes
4. Rinse in water for 2 minutes
5. Differentiate in 0.5% acid alcohol for 10 seconds
6. Rinse in water for 2 minutes
7. Blue in Scotts Tap Water Substitute for 2 minutes
8. Rinse in water for 2 minutes
9. Dehydrate in 70% alcohol for 2 minutes
10. Dehydrate in 95% alcohol for 2 minutes
11. Dehydrate in fresh 95% alcohol for 2 minutes
12. Stain in Pap. Stain OG6 for 2 minutes
13. Rinse in 95% alcohol for 2 minutes
14. Rinse in fresh 95% alcohol for 2 minutes
15. Stain in Pap. Stain EA50 for 2 minutes
16. Rinse in 95% alcohol for 1 minute
17. Dehydrate, clear and mount

## Hazard Information

**UN1992**





# PAS Stain Kit (modified McManus 1946)

This stain kit is used for the demonstration of neutral mucins, glycogen and some early lipofuchsins. The technique is based upon the reactivity of free aldehyde groups within carbohydrates whereby the Schiff reagent forms a bright red magenta end product

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK15 | 3 x 50ml | 3 x 100ml | 3 x 250ml | 3 x 500ml |

## Kit Contents

- Periodic Acid Solution 1%
- Haematoxylin Harris
- Schiff Reagents (Feulgen)

## General Information

| | |
|---|---|
| Procedure Time | 45 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | Schiff Reagent 2-8 °C. Other Reagents 15-25 °C |

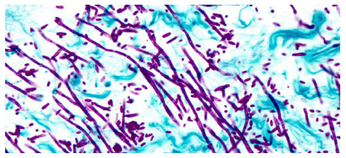
## Results

| | |
|---|---|
| Nuclei: | Blue-Black |
| Glycogen: | Magenta |
| Neutral/sialomucins: | Magenta |
| Various glycoproteins, early lipofuchsins: | Magenta |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Oxidise slides with periodic acid solution for 5 minutes
3. Wash well in several changes of distilled water
4. Stain with Schiff reagent for 20 minutes at room temperature
5. Wash slides well in running tap water for 5-10 minutes (sections should macroscopically be pink/magenta in colour)
6. Stain sections in haematoxylin for 1 minute
7. Wash well in water, differentiate in 0.5% acid alcohol and blue in running water or Scotts tap water substitute
8. Dehydrate, clear and mount

## Hazard Information



# PAS Stain Kit for fungal cell walls(modified McManus 1946)

This stain kit is based upon the cell walls of fungi being rich in polysaccharides which can be converted by oxidation to dialdehydes and demonstrated with Schiff reagent

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK157 | 3 x 50ml | 3 x 100ml | 3 x 250ml | 3 x 500ml |

## Kit Contents

Periodic Acid Solution 1%

Light Green 0.2% in 0.2% Acetic Acid

Schiff Reagents (Feulgen)

## General Information

| | |
|---|---|
| Procedure Time | 35 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | Schiff reagent 2-8 °C. Other Reagents 15-25 °C |

## Results

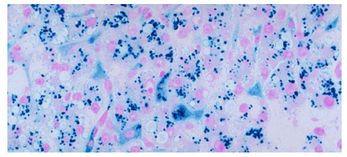
| | |
|---|---|
| Fungal Cell walls: | Magenta |
| Tissue glycogen: | Magenta |
| Background: | Pale Green |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Oxidise slides with periodic acid solution for 5 minutes
3. Wash well in several changes of distilled water
4. Stain with Schiff reagent for 20 minutes at room temperature
5. Wash slides well in running tap water for 5-10 minutes (sections should macroscopically be pink/ magenta in colour)
6. Stain sections in light green solution for 1-2 seconds
7. Wash well in water, differentiate in 0.5% acid alcohol and blue in running water or Scotts tap qater substitute
8. Dehydrate, clear and mount

## Hazard Information





# Perls Stain Kit

This stain kit is used to demonstrate ferric salts in tissue sections. Treatment with an acid ferrocyanide solution will result in the unmasking of ferric iron in the form or hydroxide, Fe(OH)3, by dilute hydrochloric acid. The ferric iron then reacts with a dilute potassium ferrocyanide solution to produce an insoluble blue compound, ferric ferocyanide (Prussian Blue)

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK16 | 3 x 50ml | 3 x 100ml | 3 x 250ml | 3 x 500ml |

## Kit Contents

Perls Stain Solution A - Hydrochloric Acid Solution 2%

Perls Stain Solution B - Potassium Ferrocyanide Solution 2%

Counterstain: Neutral Red Solution 0.1%

## General Information

| | |
|---|---|
| Procedure Time | 30 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | Perls A & Perls B 2-8 °C. Neutral Red 15-25 °C |

## Results

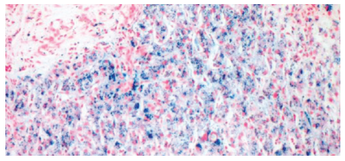
| | |
|---|---|
| Nuclei: | Red |
| Ferric Iron: | Blue |

## Protocol

Preparation of Perls Ferrocyanide Solution:
Perls A 2.5ml, Perls B 2.5ml
Mix immediately before use. Must be freshly prepared for staining. Amount of A & B solution used depends on number of slides to be stained

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Rinse well in distilled water
3. Treat slides with Perls ferrocyanide solution for 20 minutes
4. Wash in running tap water
5. Rinse in distilled water
6. Stain with neutral red solution for 15 seconds
7. Wash rapidly in distilled water and blot dry
8. Dehydrate rapidly in alcohols, clear and mount

## Hazard Information



# Perls Stain Kit (Haematology Version)

This stain kit is used to demonstrate hemosiderin in bone marrow macrophages and iron within sideroblasts

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK165 | 3 x 50ml | 3 x 100ml | 3 x 250ml | 3 x 500ml |

## Kit Contents

Perls Stain A: Hydrochloric Acid Solution 2%

Perls Stain B: Potassium Ferrocyanide Solution 2%

Counterstain: Neutral Red Solution 0.5%

## General Information

| | |
|---|---|
| Procedure Time | 30 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | Perls A & Perls B 2-8 °C. Neutral Red 15-25 °C |

## Results

| | |
|---|---|
| Nuclei: | Red |
| Ferric Iron: | Blue |

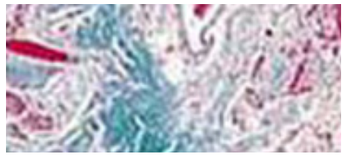
## Protocol

Preparation of Perls Ferrocyanide Solution:
Perls A 2.5ml, Perls B 2.5ml
Mix immediately before use. Must be freshly prepared for staining. Ammount of A & B solution used depends on number of slides to be stained.

1. Fix the slides in suitable fixative such as methanol for 10-20 minutes. Leave to air dry
2. Treat slides with Perls ferrocyanide solution for 20 minutes
3. Wash in running tap water
4. Rinse in distilled water
5. Stain with neutral red solution for 30 seconds
6. Wash rapidly in distilled water and blot dry
7. Use usual method and viewing microscopically e.g immersion oil

## Hazard Information





# Perls Van Gieson Stain Kit (Perls 1867, Van Gieson 1889)

This stain kit demonstrates ferric iron, collagen and connective tissue in sections

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK60 | 3 x 50ml | 3 x 100ml | 3 x 250ml | 3 x 500ml |

## Kit Contents

Perls Stain Solution A - Hydrochloric Acid Solution 2%

Perls Stain Solution B - Potassium Ferrocyanide Solution 2%

Van Gieson Extra

## General Information

| | |
|---|---|
| Procedure Time | 30 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | Store Perls solutions 2-8 °C. Other Van Gieson 15-25 °C |

## Results

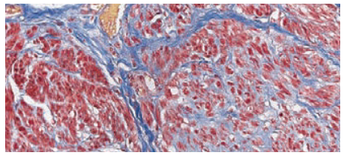
| | |
|---|---|
| Ferric Reactive Iron: | Blue |
| Collagen: | Purple/Red |
| Other Tissues: | Yellow |

## Protocol

Preparation of Perls Ferrocyanide Solution
Perls A 2.5ml Perls B 2.5ml Mix immediately before use. Must be freshly prepared for staining. Amount of A & B solution used depends on number of slides to be stained

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Treat slides with Perls ferrocyanide solution for 20 minutes
3. Wash in running tap water
4. Rinse in distilled water
5. Stain with Van Gieson solution 2-3 minutes
6. Wash quickly in water and blot dry
7. Dehydrate rapidly, clear and mount

## Hazard Information



# Picro Mallory Trichrome Stain Kit

This stain kit allows the selective demonstration of muscle, collagen fibres and erythrocytes. This trichrome stain uses 3 dyes of differing molecular size

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK90 | 6 x 50ml | 6 x 100ml | 6 x 250ml | 6 x 500ml |

## Kit Contents

| | |
|---|---|
| Glacial Acetic Acid 0.5% Aqueous x 2 | Picro Mallory Solution B |
| Saturated Aqueous Picric Acid Solution | Phosphotungstic Acid 1% Solution |
| Picro Mallory Solution A | |

## General Information

| | |
|---|---|
| Procedure Time | 105 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 °C. |

## Results

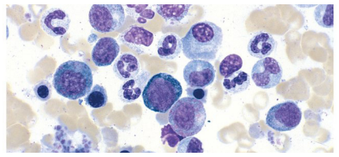
| | |
|---|---|
| Nuclei: | Red |
| Erythrocytes and Myelin: | Yellow |
| Cytoplasm: | Various shades of Red, Pink, Orange |
| Mucous and Cartilage Matrix: | Blue |
| Collagen: | Blue |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Place slides in saturated picric acid solution for 1 hour at 56°C
3. Wash in tap water (3 changes of running water for 2 mins), then distiled water
4. Stain with Picro Mallory Solution A for 2 minutes
5. Rinse in distilled water
6. Differentiate with phosphotungstic acid for 5 mins
7. Rinse in distilled water
8. Stain with Picro Mallory Solution B for 30 minutes
6. Rinse with 0.5% glacial acetic acid to wash off excessive stain
7. Dehydrate, clear and mount

## Hazard Information





# Rapi-Diff II Stain Kit

This stain kit is used for the rapid differential evaluation of haematological and cytological smears

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK1 | 3 x 50ml | 3 x 100ml | 3 x 250ml | 3 x 500ml |

## Kit Contents

RRSP133 - Rapi-Diff II Stain - Solution A

RRSP134 - Rapi-Diff II Stain - Solution B

RRSP135 - Rapi-Diff II Stain - Solution C

## General Information

| | |
|---|---|
| Procedure Time | 1 minute (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 °C |

## Results

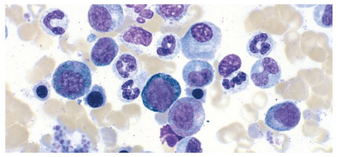
| | |
|---|---|
| Nuclei: | Varying shades of red/purple |
| Cytoplasm -Lymphocytes/ Monocytes: | Pale blue |
| Granules in Neutrophils: | Red/Purple |
| Basophil granules: | Blue/Black |
| Eosinophil granules: | Bright Orange |
| Red blood cells: | Pink/Orange |

## Protocol

1. Prepare thin blood smears on grease free slides, and air dry
2. Fix by immersion in solution A for 5 seconds
3. Transfer, without rinsing or drying, to solution B and stain for 5 seconds by slowly agitating the slide in the solution or immersing and withdrawing the slide several times during a 5-second period Drain excess stain onto absorbent paper
4. Transfer slide to solution C and repeat staining as for solution B
5. Rinse the slide briefly in buffered water (pH 6.8) and allow to dry

## Hazard Information

**UN1230**



# Rapi-Diff II Stain Kit Extra

This stain kit is for the rapid differential evaluation of haematological and cytological smears

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK190 | 4 x 50ml | 4 x 100ml | 4 x 250ml | 4 x 500ml |

## Kit Contents

RRSP133 - Rapi-Diff II Stain - Solution A

RRSP134 - Rapi-Diff II Stain - Solution B

RRSP135 - Rapi-Diff II Stain - Solution C

Buffer Tablets pH 6.8 (Each Tablet make 1L of buffer)

## General Information

| | |
|---|---|
| Procedure Time | 1 minute (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 °C |

## Results

| | |
|---|---|
| Nuclei: | Varying shades of red/purple |
| Cytoplasm -Lymphocytes/ Monocytes: | Pale blue |
| Granules in Neutrophils: | Red/Purple |
| Basophil granules: | Blue/Black |
| Eosinophil granules: | Bright Orange |
| Red blood cells: | Pink/Orange |

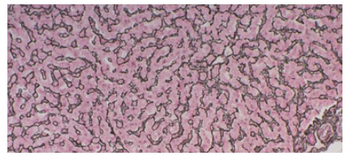
## Protocol

1. Prepare thin blood smears on grease free slides, and air dry
2. Fix by immersion in solution A for 5 seconds
3. Transfer, without rinsing or drying, to solution B and stain for 5 seconds by slowly agitating the slide in the solution or immersing and withdrawing the slide several times during a 5-second period Drain excess stain onto absorbent paper
4. Transfer slide to solution C and repeat staining as for solution B.
5. Dilute the buffer tablet as per instruction
6. Rinse the slide briefly in buffered water (pH 6.8) and allow to dry

## Hazard Information

**UN1230**





# Reticulin Stain Kit (Gordon & Sweets 1936) (with Gold Chloride)

This stain kit is used to demonstrate reticulin fibres. The Gordon & Sweet method uses metal impregnation providing excellent contrast so even the finest fibres can be seen

| | 100 Test | 200 Test |
|---|---|---|
| Code | - 100 | -200 |
| RRSK105 | 12 x 50ml | 12 x 100ml |

## Kit Contents

| | |
|---|---|
| Potassium Permanganate 0.5% Solution x 2 | Sodium Hydroxide 3% Solution |
| Sulphuric Acid 3% Solution | Formaldehyde 10% (v/v) Solution Unbuffered |
| Oxalic Acid 1% Solution | Sodium Thiosulphate 5% Solution |
| Ferric Ammonium Sulphate 2.5% Solution | Gold Chloride 0.2% Solution |
| Silver Nitrate 10% Solution | Neutral Red 0.5% |
| Ammonia 33% Solution | |

## General Information

| | |
|---|---|
| Procedure Time | 50 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | Store silver nitrate 2-8°C. Other reagents 15-25 °C |

## Results

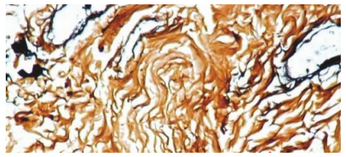
| | |
|---|---|
| Reticulin fibres: | Black |
| Nuclei: | Black (lipofuchsin and melanin are also weakly stained) |
| Other Elements: | Red |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Oxidise the sections with acidified potassium permanganate for 5 minutes
3. Wash well in tap water
4. Decolourise with oxalic acid solution for 1 minute
5. Wash sections well in tap water
6. Mordant sections in ferric ammonium sulphate solution for 15 minutes
7. Wash well with several changes of distilled water
8. Treat with filtered ammoniacal silver solution for 12-15 seconds
9. Wash well in several changes of distilled water (the section must be transluscent)
10. Reduce in the formaldehyde solution for 1-2 minutes, check microscopically and if under impregnated repeat steps 8-10
11. Wash in distilled water
12. Tone in 0.2% gold dhloride solution for 3-5 minutes
13. Wash in distilled water. Treat with sodium thiosulphate for 5 minutes
14. Wash well in water
15. If counterstain is required stain with neutral red for 30 seconds
16. Rinse in water
17. Dehydrate through alcohols, clear and mount

## Hazard Information

**UN3082**



# Reticulin Stain Kit (without Gold Chloride)

This stain kit is used to demonstrate reticulin fibres. The Gordon & Sweet method uses metal impregnation providing excellent contrast so even the finest fibres can be seen

| | 100 Test | 200 Test |
|---|---|---|
| Code | - 100 | -200 |
| RRSK102 | 11 x 50ml | 11 x 100ml |

## Kit Contents

| | |
|---|---|
| Potassium Permanganate 0.5% Solution x 2 | Ammonia 33% Solution |
| Sulphuric Acid 3% Solution | Sodium Hydroxide 3% Solution |
| Oxalic Acid 1% Solution | Formaldehyde 10% (v/v) Solution Unbuffered |
| Ferric Ammonium Sulphate 2.5% Solution | Sodium Thiosulphate 5% Solution |
| Silver Nitrate 10% Solution | Neutral Red 0.5% |

## General Information

| | |
|---|---|
| Procedure Time | 50 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | Store silver nitrate 2-8°C. Other reagents 15-25 °C |

## Results

| | |
|---|---|
| Reticulin fibres: | Black |
| Nuclei: | Black (lipofuchsin and melanin are also weakly stained) |
| Other Elements: | Red |

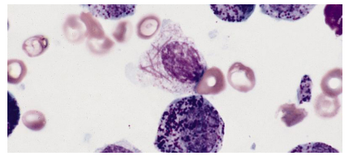
## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Oxidise the sections with acidified potassium permanganate for 5 minutes
3. Wash well in tap water
4. Decolourise with oxalic acid solution for 1 minute
5. Wash sections well in tap water
6. Mordant sections in ferric ammonium sulphate solution for 15 minutes
7. Wash well with several changes of distilled water
8. Treat with filtered ammoniacal silver solution for 12-15 seconds
9. Wash well in several changes of distilled water (the section must be transluscent)
10. Reduce in the formaldehyde solution for 1-2 minutes, check microscopically and if under impregnated repeat steps 8-10
11. Wash in distilled water
12. Treat with sodium thiosulphate for 5 minutes
13. Wash well in water
14. If counterstain is required stain with neutral red for 30 seconds
15. Rinse in water
16. Dehydrate, clear and mount

## Hazard Information

**UN3316**





# Sudan Black Stain Kit (Haematology Version)

This stain kit is used for staining peripheral blood and bone marrow smears to identify granulocytic and monocytic components of abnormal haemopoietic cells. The sudan black B cannot be extracted from the stained granules by organic dye solvents and gives comparable staining to that of MPO staining

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK61 | 4 x 50ml | 4 x 100ml | 4 x 250ml | 4 x 500ml |

## Kit Contents

| |
|---|
| Sudan Black Stain in 70% Ethanol |
| Ethanol 70% solution |
| Buffer Mordant Solution |
| Haemalum Mayer |

## General Information

| | |
|---|---|
| Procedure Time | 75 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 °C |

## Results

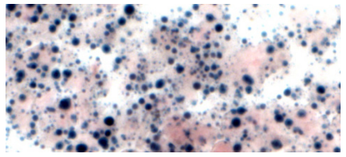
| | |
|---|---|
| Nuclei: | Red |
| Myelocytes/Promyelocytes: | Blue/Black granules increasing with cell maturity |
| Lymphocytes: | Negative |
| Mature Neutrophils: | Cytoplasm contains positive (blue/black) granules of positive reacting material |

## Protocol

1. Fix smears as per usual method
2. Rinse smears in distilled water
3. Stain smears in working stain solution i.e. 2 parts of buffer mordant solution to 3 parts sudan black B stain for 1 hour in a lidded Coplin jar. (This working solution will keep for 4 weeks)
4. Remove from the stain and rinse in 70% alcohol. After 30 seconds tip off. Repeat 3 times. This removes excess dye
5. Rinse smears gently in running tap water for up to 2 minutes and air dry
6. Counterstain with haemalum Mayer for 2-3 minutes
7. Rinse gently in running tap water and blot dry
8. Mount in aqueous mountant or examine under immersion oil

## Hazard Information

**UN1170**



# Sudan Black B Stain Kit (Histology Version)

This stain kit is used for staining phospholipids as well as neutral fats. sudan black B does not stain cholesterol, lecithins and free fatty acids. There are two distinct fractions in this dye, the first stains neutral fats blue-black, whilst the second fraction (a basic dye) stains phospholipids grey. Sudan black B does not stain cholesterol, leathiris and free fatty acids

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK17 | 3 x 50ml | 3 x 100ml | 3 x 250ml | 3 x 500ml |

## Kit Contents

- Sudan Black Stain in 70% ethanol
- Ethanol 70% solution
- Neutral red 0.5% aqueous

## General Information

| | |
|---|---|
| Procedure Time | 130 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 °C. |

## Results

| | |
|---|---|
| Phospholipids: | Grey |
| Unsaturated Esthers/ Triglicerides: | Blue/Black |
| Nuclei: | Red |

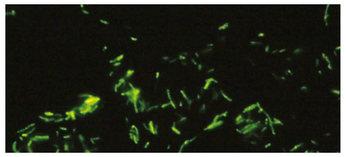
## Protocol

1. Rinse cryostat sections in 70% ethanol
2. Stain for 2 hours in sudan black B solution
3. Rinse sections in 70% ethanol to remove excess dye for 2-3 minutes
4. Wash in tap water for 2 minutes
5. Blot dry and counterstain in neutral red solution for 2-3 minutes
6. Wash well in water
7. Mount in aqueous mountant or examine under immersion oil

## Hazard Information

**UN1170**





# TB Fluorescent Stain Kit I (Auramine Phenol Lempert)

This stain kit is used for the demonstration of M-Tuberculosis and other acid fast organisms in tissue sections and smears. The protocol uses auramine O which is a yellow cationic dye used as a fluorochrome which attaches to the tubercle bacilli and is visualised by use of fluorescent microscopy

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK18 | 3 x 50ml | 3 x 100ml | 3 x 250ml | 3 x 500ml |

## Kit Contents

- Auramine Phenol Lempert Solution
- Auramine Phenol Differentiator
- Potassium Permanganate 0.5% Aqueous Solution

## General Information

| | |
|---|---|
| Procedure Time | 30 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 °C |

## Results

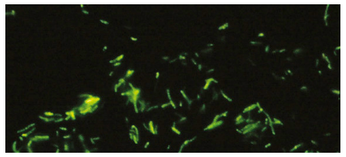
| | |
|---|---|
| Mycobacteria: | Golden Yellow Rods |
| Background: | Dark Green |

## Protocol

1. Dewax sections hydrate through alcohol and rinse in water. For smears rinse in distilled water
2. Stain slides with auramine phenol lempert for 15 minutes
3. Rinse well in distilled water
4. Differentiate in auramine differentiator for 5 minutes
5. Wash well in distilled water
6. Treat with 0.5% potassium permanganate solution for 30 seconds
7. Wash well in distilled water and drain slides
8. Dehydrate rapidly through alcohols, clear and mount

## Hazard Information

**UN1992**



# TB Fluorescent Stain Kit II

This stain kit is used for the demonstration of M-Tuberculosis and other acid fast organisms in tissue sections and smears. The protocol uses auramine O which is a yellow cationic dye used as a fluorochrome which attaches to the tubercle bacilli and is visualised by use of fluorescent microscopy

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK19 | 3 x 50ml | 3 x 100ml | 3 x 250ml | 3 x 500ml |

## Kit Contents

Auramine Rhodamine Phenol Lempert Solution

Auramine Phenol Differentiator

Potassium Permanganate 0.5% Aqueous Solution

## General Information

| | |
|---|---|
| Procedure Time | 30 minutes post warming of working solution (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 °C |

## Results

| | |
|---|---|
| Mycobacteria: | Golden Yellow Rods |
| Background: | Dark Green |

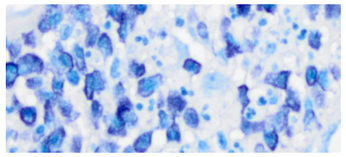
## Protocol

1. Dewax sections, hydrate through alcohol and rinse in water. For smears rinse in distilled water
2. Preheat the auramine rhodamine to 60 degrees C in an oven or water bath. Mix well after heating and filter onto slides, stain for 10 minutes
3. Rinse well in distilled water
4. Differentiate in auramine differentiator for 5 minutes
5. Wash well in distilled water
6. Treat with 0.5% potassium permanganate solution for 30 seconds
7. Wash well in distilled water and drain slides
8. Dehydrate rapidly through alcohols, clear and mount

## Hazard Information

**UN1992**





# Toluidine Blue Stain Kit

This stain kit is used for the demonstration of mast cells in tissue sections. The granules within the cytoplasm of mast cells are metachromatic. The metachromatic staining is due to pH, dye concentration and temperature of the basic dye

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK609 | 6 x 50ml | 6 x 100ml | 6 x 250ml | 6 x 500ml |

## Kit Contents

Toluidine Blue 1% in 70% alcohol

Sodium Chloride 0.9% aqueous x 5

## General Information

| | |
|---|---|
| Procedure Time | 12 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 °C |

## Results

| | |
|---|---|
| Mast Cells: | Violet |
| Background: | Shades of Blue |

## Protocol

Working Solution

Toluidine blue stock 1ml

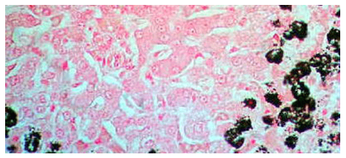
Sodium chloride solution 9ml

Make Fresh, discard after use

1. Dewax sections, hydrate through alcohol and rinse in tap water
2. Stain with the toluidine blue working solution for 3 minutes
3. Wash with 3 changes of distilled water
4. Dehydrate rapidly through alcohols, clear and mount

## Hazard Information

**UN1170**



# Von Kossa Stain Kit

This stain kit is used to visualise calcium deposits in tissue sections. The sections are treated with a silver nitrate solution and silver is deposited by replacing the calcium reduced by strong light which can then be visualized as metallic silver

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK38 | 3 x 50ml | 3 x 100ml | 3 x 250ml | 3 x 500ml |

## Kit Contents

Silver Nitrate 5% solution

Sodium Thiosulphate 5% solution

Neutral Red (0.5% Aqueous) solution

## General Information

| | |
|---|---|
| Procedure Time | 75 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | Silver Nitrate 2-8 °C. Other Reagents 15-25 °C |

## Results

| | |
|---|---|
| Calcium Salts: | Black |
| Nuclei: | Red |
| Cytoplasm: | Pink |

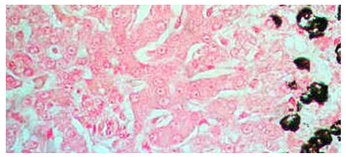
## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Place in silver nitrate solution and expose to strong light for 1 hour
3. Wash in 3 changes of distilled water
4. Treat with sodium thiosulphate for 5 minutes
5. Rinse well in distilled water
6. Counterstain with neutral red for 5 minutes
7. Rinse in water
8. Dehydrate rapidly through alcohols, clear and mount

## Hazard Information

**UN3082**





# Von Kossa Stain Kit (Strong)

This stain kit is used to visualise calcium deposits in tissue sections. The sections are treated with a silver nitrate solution and silver is deposited by replacing the calcium reduced by strong light which can then be visualised as metallic silver

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK39 | 3 x 50ml | 3 x 100ml | 3 x 250ml | 3 x 500ml |

## Kit Contents

Silver Nitrate 10% solution

Sodium Thiosulphate 5% solution

Neutral Red (0.5% Aqueous) solution

## General Information

| | |
|---|---|
| Procedure Time | 75 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | Silver Nitrate 2-8 °C. Other Reagents 15-25 °C |

## Results

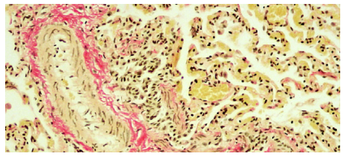
| | |
|---|---|
| Calcium Salts: | Black |
| Nuclei: | Red |
| Cytoplasm: | Pink |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water
2. Place in silver nitrate solution and expose to strong light for 1 hour
3. Wash in 3 changes of distilled water
4. Treat with sodium thiosulphate for 5 minutes
5. Rinse well in distilled water.
6. Counterstain with neutral red for 5 minutes
7. Rinse in water
8. Dehydrate rapidly through alcohols, clear and mount

## Hazard Information

**UN3082**



# Weigerts Haematoxylin/Van Gieson Stain Kit

This stain kit is used for the demonstration of collagen fibres. Van Gieson's method is a mixture of two anionic dyes which impart one colour to collagen and another to cytoplasm including muscle fibres and erythrocytes. By using an iron haematoxylin (Weigert's) which is an acid resitant nuclear stain, the Van Gieson counterstain produces the differential staining of the collagen and cytoplasm

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK22 | 4 x 50ml | 4 x 100ml | 4 x 250ml | 4 x 500ml |

## Kit Contents

| | |
|---|---|
| Haematoxylin Weigert Stain A | Acid Alcohol 0.5% |
| Haematoxylin Weigert Stain B | |
| Van Gieson Extra Stain | |

## General Information

| | |
|---|---|
| Procedure Time | 35 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 °C |

## Results

| | |
|---|---|
| Nuclei: | Blue-Black |
| Collagen: | Red |
| Red Blood Cells: | Yellow |
| Muscle: | Yellow |

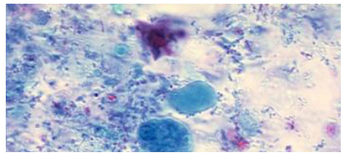
## Protocol

1. Prepare working haematoxylin solution by mixing equal parts of haematoxylin solutions A & B
2. Dewax sections, hydrate through alcohol and rinse in tap water
3. Stain in Haematoxylin working solution for 20 minutes. (save solution until stain is completed)
4. Wash in tap water
5. Differentiate in 0.5% acid alcohol. Check microscopically. Under differentiation is required as the Van Gieson stain will remove some of the haematoxylin
6. Rinse in tap water
7. Blue in Scotts tap water and rinse in running water
7. Stain in Van Gieson Stain for 2 minutes
8. Rinse quickly in distilled water, blot dry
9. Dehydrate quickly in absolute alcohol (picric acid is highly soluble in alcohol. Exposure to alcohol must be minimal), clear and mount

## Hazard Information

**UN1170**





# Wheatleys Trichrome Stain Kit

This stain kit is commonly used for the staining of foecal films to aid in the diagnosis of intestinal protozoa

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK63 | 4 x 50ml | 4 x 100ml | 4 x 250ml | 4 x 500ml |

## Kit Contents

| | |
|---|---|
| Wheatley's Trichrome Stain | Iodine 2% Alcoholic |
| Wheatley's Differentiator | |
| Denatured Ethanol 70% | |

## General Information

| | |
|---|---|
| Procedure Time | 55 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 °C |

## Results

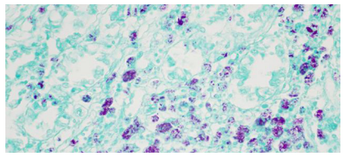
| | |
|---|---|
| Cytoplasm of Protozoan trophozoites: | Blue/Green |
| Cysts: | Purple |
| Nuclei and inclusions (chromatoid bodies, RBC, bacteria, and Charcot-Leyden crystals): | Red, sometimes tinged with purple |

## Protocol

1. Remove slide from Schaudinn's fixative, and place slide in 70% denatured ethanol for 5 min
2. Place slide in Iodine 2% alcoholic solution for 1 min for fresh specimens or 5-10 min for PVA-preserved air-dried smears
3. Place slide in 70% denatured ethanol for 5 min
4. Place slide in 70% denatured ethanol again for 3 min
5. Place in trichrome stain for 10 min
6. Place in Wheatley's differentiator for 1-3 seconds. Immediately drain the rack, and proceed to the next step. Do not allow slides to remain in this solution
7. Dip several times in 100% ethanol (not supplied). Use this step as a rinse
8. Place in two changes of 100% ethanol (not supplied) for 3 min each
9. Place in xylene for 5 min
10. Place in xylene again for 5 min
11. Mount with coverslip (no. 1 thickness) by using mounting medium
12. Allow the smear to dry overnight or after 1 hr at 37°C
13. Examine the smear microscopically with 100X objective. Examine at least 200-300 oil immersion fields

## Hazard Information

**UN1170**



# ZN Stain Kit, Malachite Green

This stain kit is used for the staining of Mycobacterium tuberculosis and other acid fast organisms. The cell walls of Mycobacteria are not readily penetrated so in order to stain Mycobacteria the basic fuchsin is mixed with phenol to make a powerful stain. Heat can be applied to "force " the stain into the bacillus. Once stained the bacillus is very resistant to decolourisation retaining the stain even when the rest of the preparation has been decolourised

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK23 | 4 x 50ml | 4 x 100ml | 4 x 250ml | 4 x 500ml |

## Kit Contents

Carbol Fuchsin ZN

TB Differentiator x 2

Malachite Green 0.5% Aqueous

## General Information

| | |
|---|---|
| Procedure Time | 35-45 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 °C |

## Results

| | |
|---|---|
| Acid fast bacilli (M.tuberculosis): | Magenta/Red |
| Cells and background material, other organisms: | Green |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water. For smears flood slides with distilled water
2. Place sample in a 50ml Coplin jar (or slide mailer 20 ml) of carbol fuchsin. Place in an oven at 37 °C, for smears 20 mins, sections 30 mins
3. Remove from staining solution and place on staining rack and wash well with deionised water for 3-5 minutes
4. Differentiate with TB differentiator until preparation is colourless or pale pink 20-30 seconds
5. Wash well in tap water for 5 minutes
6. Counterstain with malachite green for 15-20 seconds
7. Wash well in distilled water
8. Dehydrate rapidly, clear and mount

## Hazard Information

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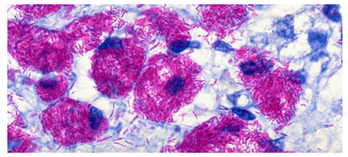

# ZN Stain Kit, Methylene Blue

This stain kit is used for the staining of Mycobacterium tuberculosis and other acid fast organisms. The cell walls of Mycobacteria are not readily penetrated so in order to stain Mycobacteria the basic fuchsin is mixed with phenol to make a powerful stain. Heat can be applied to "force " the stain into the bacillus. Once stained the bacillus is very resistant to decolourisation retaining the stain even when the rest of the preparation has been decolourised

| | 100 Test | 200 Test | 500 Test | 1000 Test |
|---|---|---|---|---|
| Code | - 100 | -200 | -500 | -1000 |
| RRSK24 | 4 x 50ml | 4 x 100ml | 4 x 250ml | 4 x 500ml |

## Kit Contents

Carbol Fuchsin ZN

TB Differentiator x 2

Methylene Blue (AFB)

## General Information

| | |
|---|---|
| Procedure Time | 35-45 minutes (approximate) |
| Shelf Life | 3 Years (from date of manufacture) |
| Storage | 15-25 °C |

## Results

| | |
|---|---|
| Acid fast bacilli (M.tuberculosis): | Magenta/Red |
| Cells and background material, other organisms: | Blue |

## Protocol

1. Dewax sections, hydrate through alcohols and rinse in tap water. For smears flood slides with distilled water
2. Place sample in a 50 ml Coplin jar (or slide mailer 20 ml) of carbol fuchsin. Place in an oven at 37 °C, for smears 20 mins, sections 30 mins
3. Remove from staining solution and place on staining rack and wash well with deionised water for 3-5 minutes
4. Differentiate with TB differentiator until preparation is colourless or pale pink 20-30 seconds.
5. Wash well in tap water for 5 minutes
6. Counterstain with methylene blue (AFB) for 15 seconds
7. Wash well in distilled water
8. Dehydrate rapidly, clear and mount

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