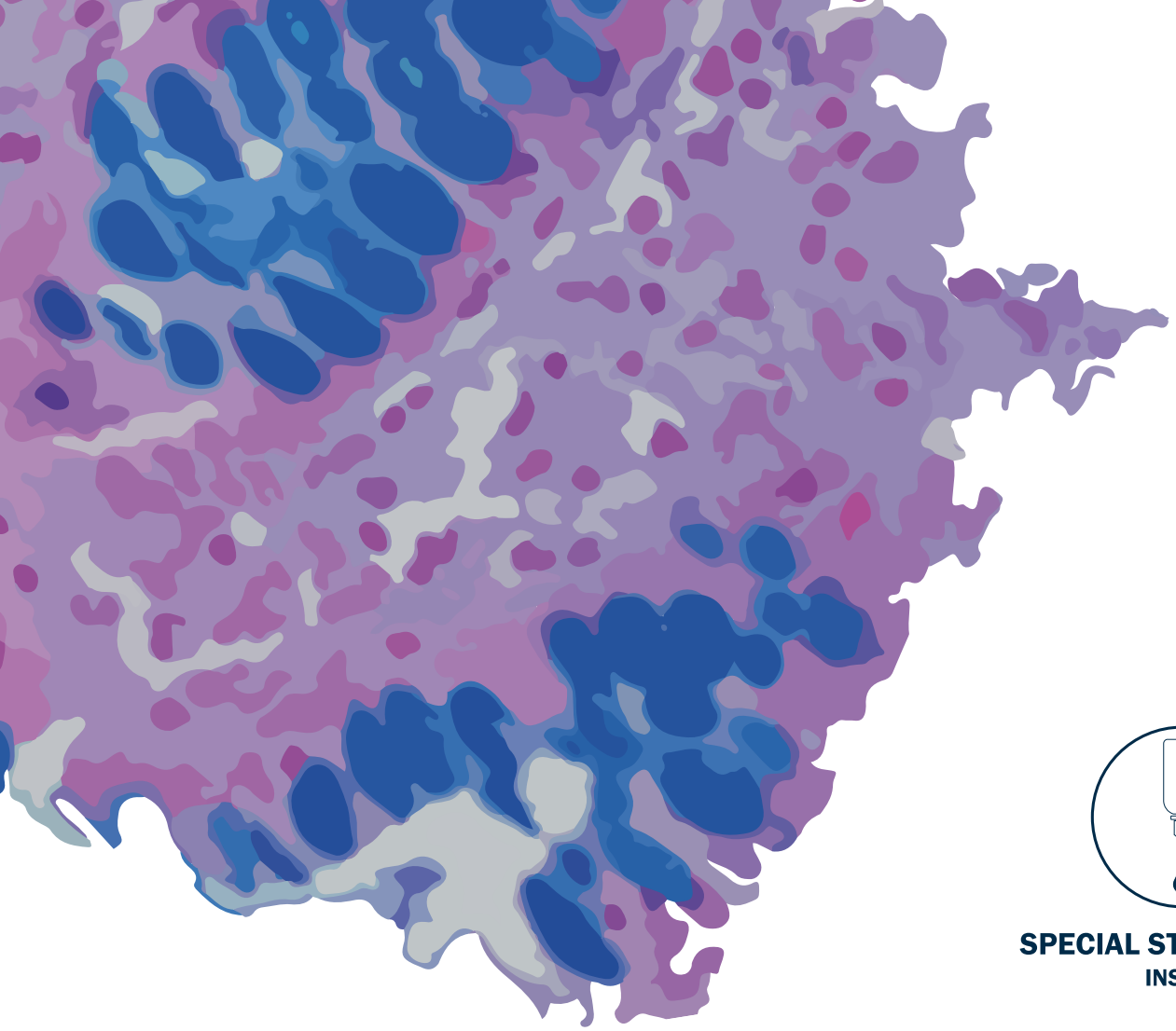
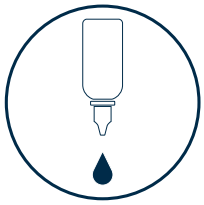




SPECIAL STAINS GUIDE
INSIDE

Bio-Optica

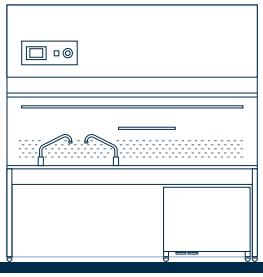
Improving Pathology

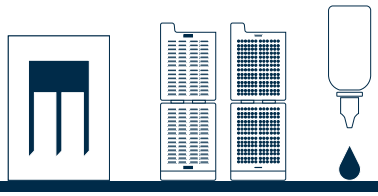
Vertrieb in Deutschland :
RESOLAB GmbH
Alter Rehmer Weg 7
32574 Bad Oeynhausen
Tel. 05731-8689890
Fax 05731-8689891
Email info@resolab.de
Web www.resolab.de

GENERAL CATALOGUE

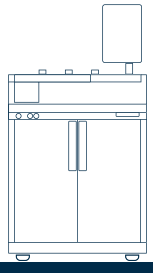
Bio-Optica

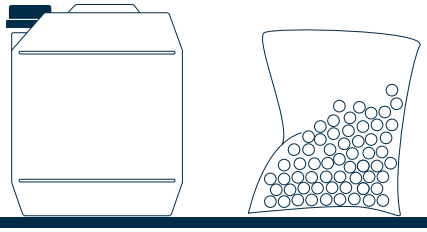
Klessidra



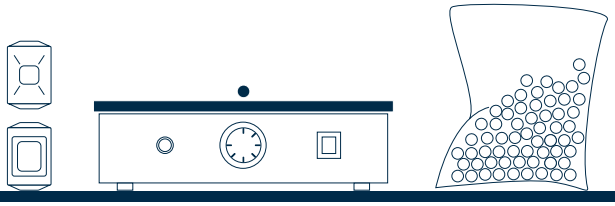


Grossing

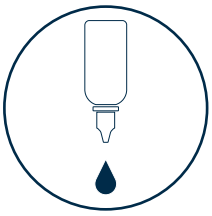


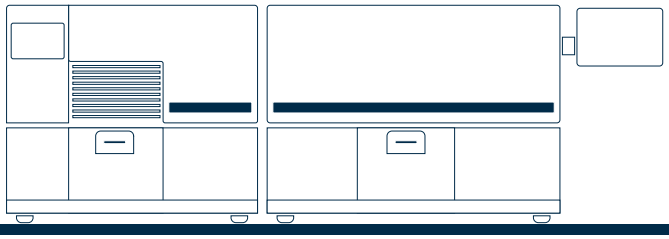


Processing

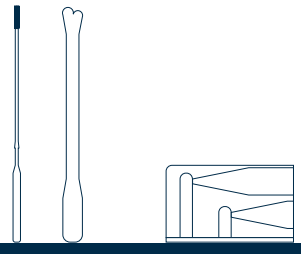


Embedding and sectioning

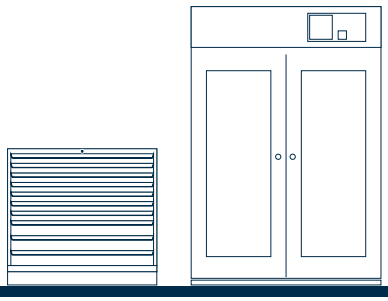


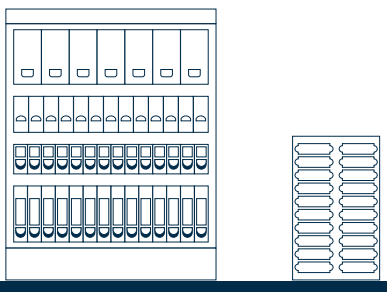


Staining and mounting



Cytology





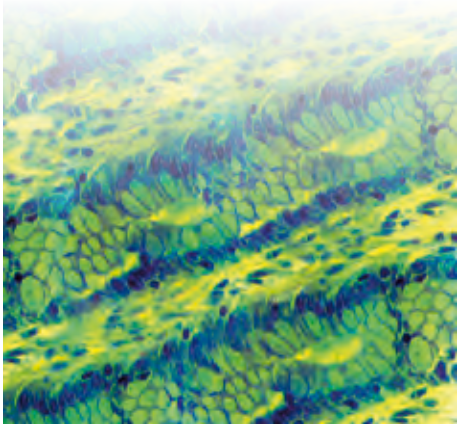
Storage

HISTORY

Founded in **1977**, Bio-Optica, is a solid and established reality committed to anatomic pathology, and thanks to its complete and unique portfolio of instruments, reagents and consumables, it operates on the national and international markets.

CERTIFIED QUALITY

The active collaboration with customers and a constant research for innovation, in order to reach high quality standards, is demonstrated by the **ISO 13485** certification and from May 2022 also **IVDR 2017/746 (CE)** compliant..



Reagents

MISSION

Our mission is to provide the labs operators **the best way to do their job**.

We want to ensure the chance to make diagnosis **correctly, fast and avoiding mistakes**.

We want to help people having **a long, healthy and good life**.

Consumables

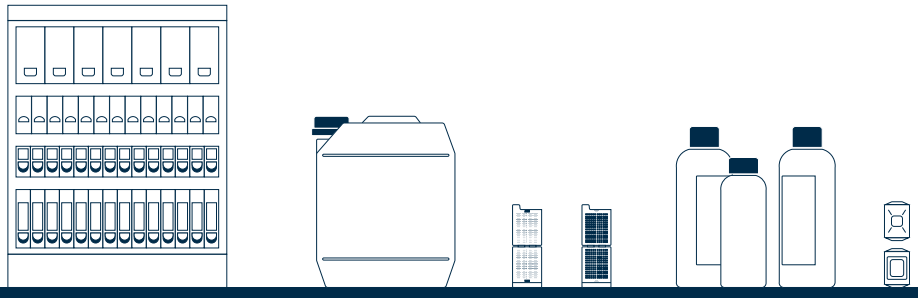
VISION

To create a network of **trusted distributors** all over the world and allow them to achieve more.

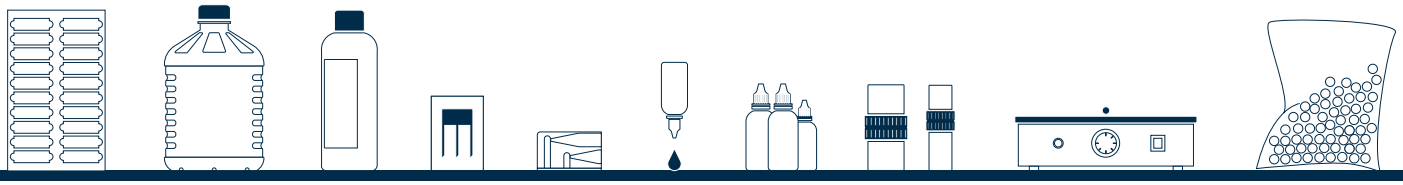
Be capable to understand **customer needs**, provide high standards and innovative solutions.

To build the most **dynamic business** capable of attracting every opportunity.

Equipments



Bio-Optica



Contents


REF 05-01V15PKF/A
LOT .DEMO
06-2023
Pericolo/Danger:
Bio Optica

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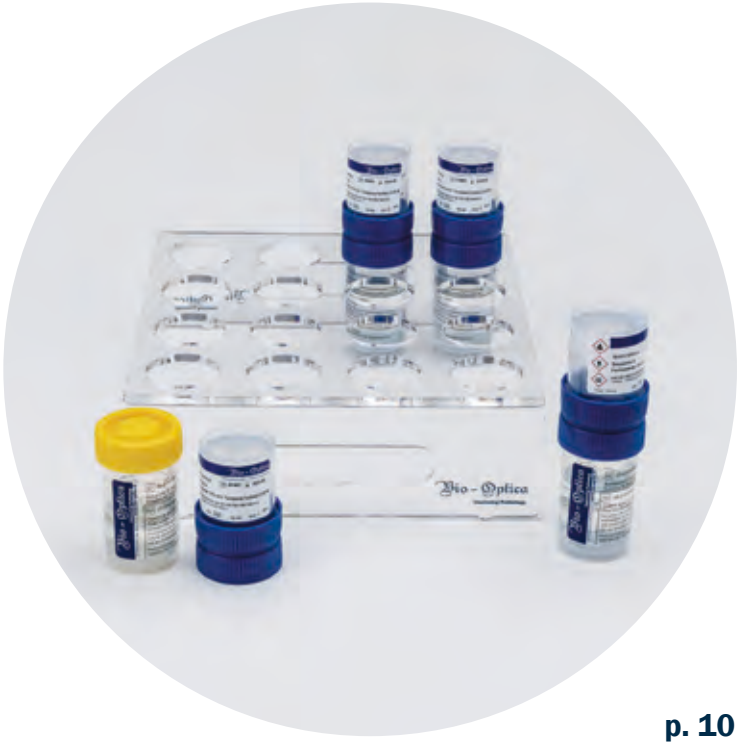

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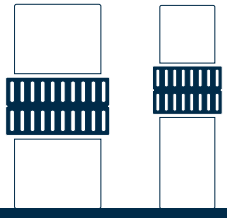


Klessidra

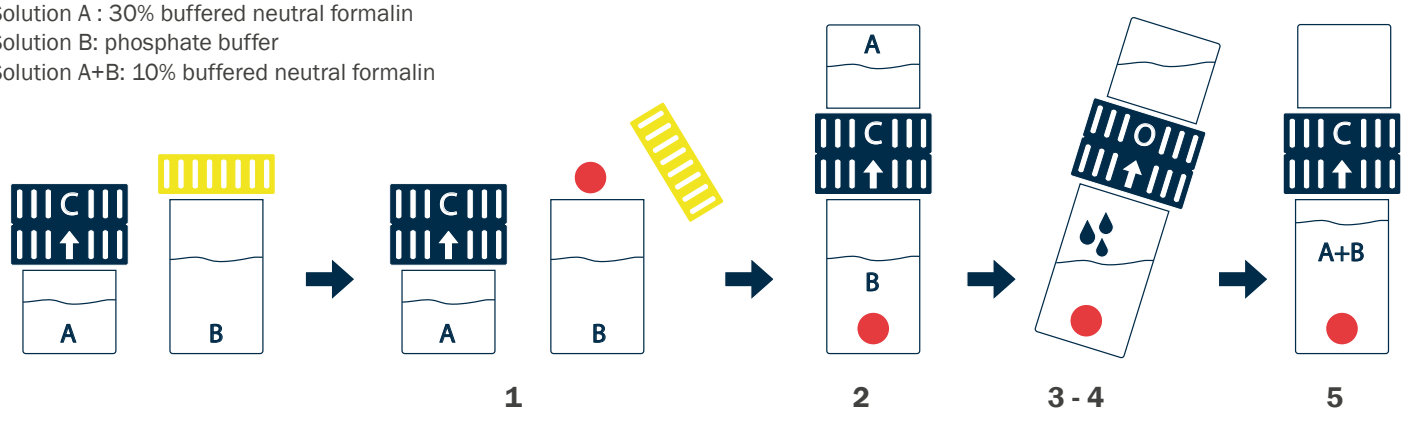
Klessidra is a patented, closed-circuit safety device, which prevents contact between formaldehyde and the user, in accordance with Commission Regulation (EU) No. 605/2014. It is intended for the fixation and transport of small histological samples.
The device is provided by a mechanism which prevents the reflux of formalin into the previous container in order to avoid
Ipofixation problems and the loss of the biopsies.

Klessidra 30

Klessidra 30 is supplied in pre-filled containers, the buffer solution helps operators remove biopsies from needles.
The container with two blue caps contains concentrated formalin. The buffered neutral 10% formalin reconstitutes after blending with the buffer solution.

	PRODUCT	PACK	CODE
●	**Klessidra 30** 10 ml formaldheyde 12% and 20 ml buffer	27 pcs.	05-01V15PKF
●	**Klessidra 30 Blue** 10 ml blue formaldheyde 12% and 20 ml buffer	27 pcs.	05-01V15PKFC
●	**Rack** Test tube rack for 16 Klessidras, to facilitate transport within the hospital	2 pcs.	05-900900
●	**Klessidra transport**		
	Safety box complete with foam with 21 places	1 pc.	05-900700
	Foam with 21 places	1 pc.	05-900800

Solution A : 30% buffered neutral formalin
Solution B: phosphate buffer
Solution A+B: 10% buffered neutral formalin

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Improving Pathology


www.bio-optica.it
REF 05-01V250PK 160 ml
KLESSDRA 3.0 Formalina 10% neutra tamponata
contiene formaldeide 4% p/v
KLESSDRA 3.0 10% Neutral buffered formalin
contains 4% w/v formaldehyde
06-2023
DEMO
15°C
25°C
CE
IVD
Bio - Optica
Improving Pathology
Formalina 10% neutra tamponata pronta all'uso
contiene formaldeide 4% p/v
10% Neutral buffered formalin ready to use
contains 4% w/v formaldehyde
Formalina 10% neutra tamponada lista para su uso
contiene formaldehido 4% p/v
IVD 90 ml
DEMO
06-2023
H350 H341 H317 P201 P261 P280 P308+P313

Klessidra 90

Klessidra 90 is the largest size in the Klessidra range.
The 90 ml size can hold up to 12 Bio Cassettes.
The maxi 160 ml version can hold two SuperMegaCassettes or 20 Bio Cassettes.

PRODUCT	PACK	CODE
Klessidra 90 90 ml of 10% buffered neutral formalin	8 pcs.	05-01V125PK
Klessidra 160 160 ml of 10% buffered neutral formalin	8 pcs.	05-01V250PK

Instruction for use

- 1) Put the specimen into the empty container (B) with or without biocassette;
- 2) On a flat surface, connect the containers (solution A on top) and apply a slight pressure from above (red arrow) in order to get the correct alignment;
- 3) On a flat surface, screw the prefilled formalin container(A)on container(B) which contains the specimen;
- 4)Rotate the two lids on “open”position (until the arrow is aligned with the“O”) and tilt the device to let the formalin flow in the lower container;
- 5) Rotate the two lids again on “close”position (until the arrow is aligned with the“C”).

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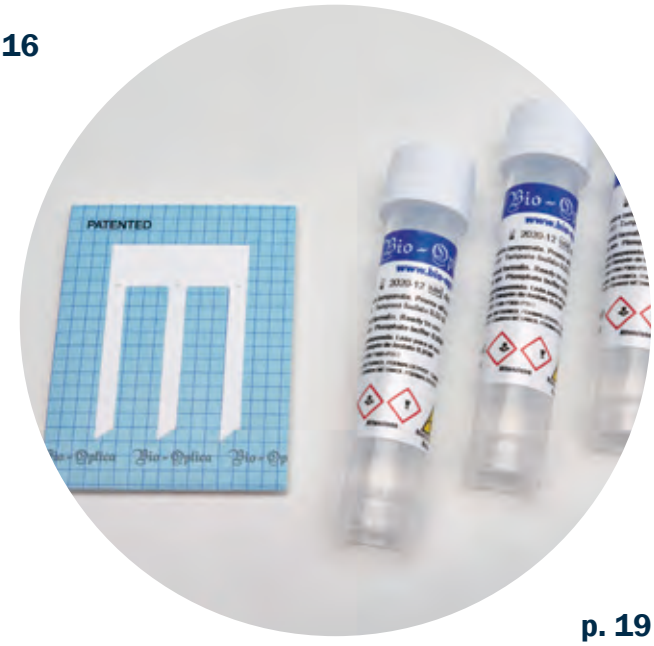

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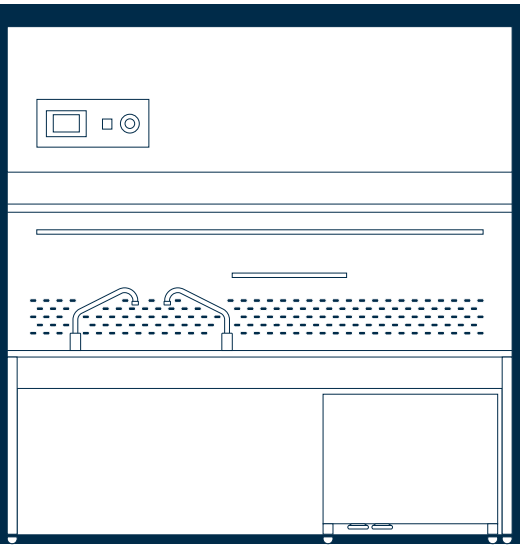

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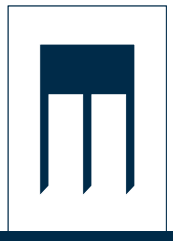
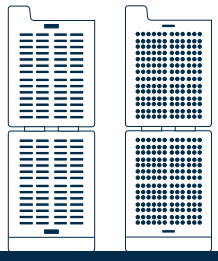
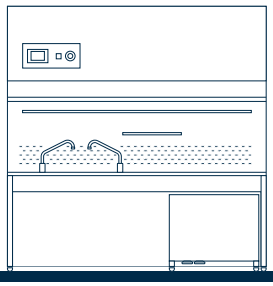




Grossing



Bio-Optica

Trimming Tech histology hood

Trimming Tech hoods are designed to the highest quality standards so as to meet all operator requirements in relation to the prevention of chemical risk during grossing of histological samples. Made of stainless steel, they are equipped with a multiple extractor system that extracts fumes from the work surface, from the front and from above. The control panel with soft-touch keypad provides an intuitive interface for setting the desired operating parameters.

Construction features

- Stainless steel structure
- Power-operated vertically sliding front safety glass sash for fume containment
- Filter basket and lid for the formalin container

Work surface features

- Non-drip lip
- Sink with pedal-operated mixer tap and pull-out shower head for washing the work surface
- Formalin disposal tank
- Waste fluid collection tanks with extractor and independent washing system

Extractor system

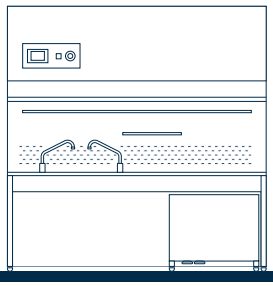
- Pre-installed alumina filters for formalin
- Cartridge-type synthetic fiber pre-filters pre-installed

	PRODUCT	WORK SURFACE	DIMENSIONS	CODE
●	**Trimming Tech 130**	with sink on left	1300x750x2230 mm	50-130-001
		with sink on right		50-130-002
●	**Trimming Tech 150**	with sink on left	1500x750x2230 mm	50-150-001
		with sink on right		50-150-002
●	**Trimming Tech 180**	with sink on left	1800x750x2230 mm	50-180-001
		with sink on right		50-180-002
		with central sink		50-180-003
●	**Trimming Tech 180 with waste bin**	with sink on the left and waste bin with lid on the right side	1800x750x2230 mm	50-180-004
		with sink on the right and waste bin with lid on the left side		50-180-005

Accessories for grossing hoods

PRODUCT	CODE
Cutting board 35 x 45 cm	50-500-050
Millimeter ruler	50-500-054
Garbage disposal unit with pedal control (*)	50-500-055
UV lamp with self-switching off programming and rolling protection curtain. (*)	50-500-057
Formalin suction filter	50-500-058
Stainless steel filter for formalin sink	50-500-059
Magnetic knife-holder (*)	50-500-060
Paper handkerchief distributor	50-500-061
Stainless steel filter for water sink	50-500-062
Magnifying glass with neon light	50-500-069
UV lamp replacement	50-500-070
Cleaning kit	50-500-071
HEPA Filter (High Efficiency Particulate Air)	50-F005
Alumina filter for formalin	50-F017
Synthetic fiber pre-filter	50-F007
Swivel stool	40-300-450
Footrest	40-300-451
Waste trolley	50-500-075

(*) Accessories which can only be installed at the time of production



Bio-Optica

Protective equipment for laboratory work

Transport bags

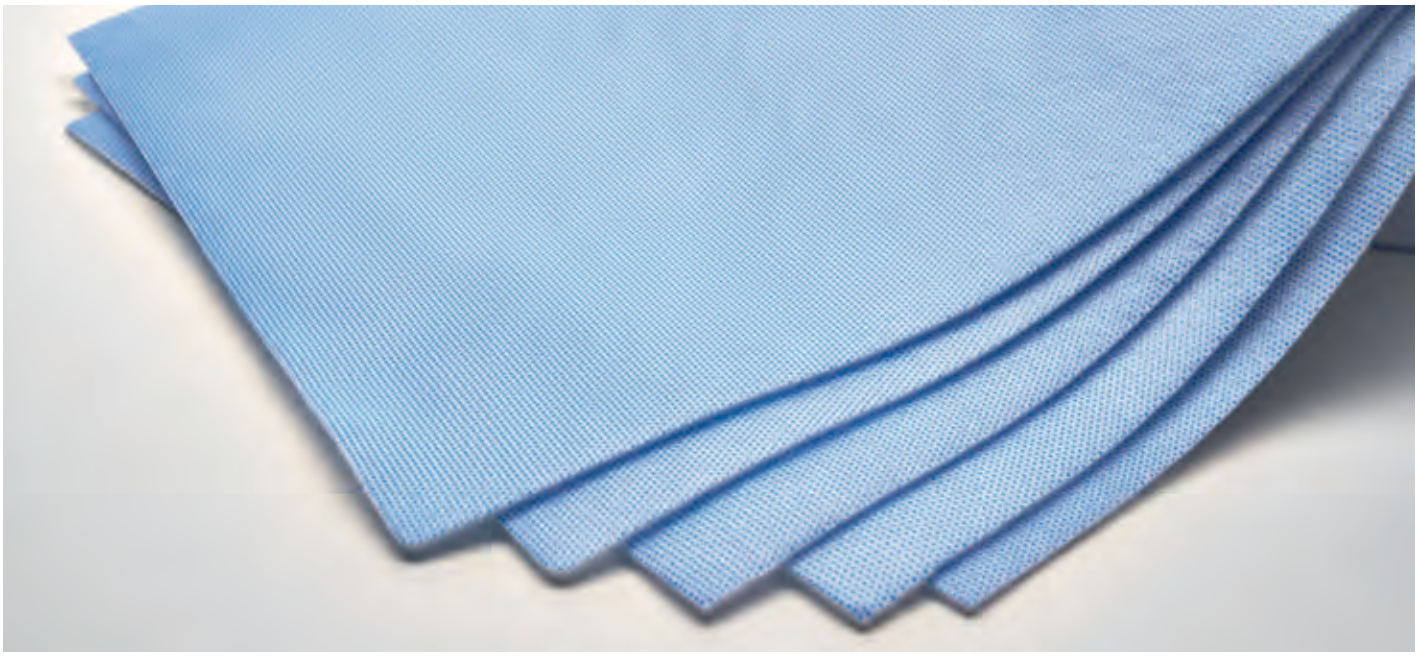
Polypropylene bags for transporting specimens, complete with grip seal closure and document folder.

DIMENSIONS	PACK	CODE
16 x 25 cm	500 pcs.	44-9590

Bio-Pads

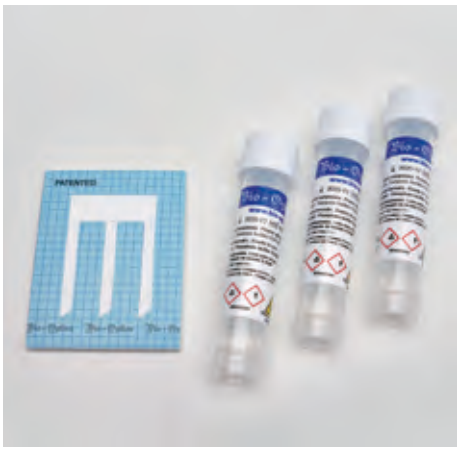
Pads made of special fabric for absorbing formaldehyde.
Ideal for containing spillages, leaks and drips of formaldehyde when grossing anatomical specimens, thus reducing the risk of operator exposure to formalin.

DIMENSIONS	PACK	CODE
203 x 254 mm	25 pcs.	08-FNP0810



Accessories

Endokit



Endokit is a complete patented system for the correct orientation of endoscopic biopsies, consisting of:

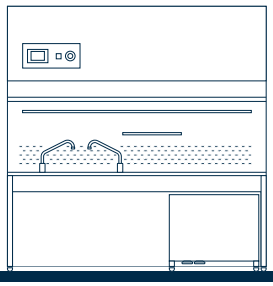
- Pre-cut strips of nitrocellulose with one slanted end
- Test tubes pre-filled with buffered neutral 10% formalin for immediate fixation of biopsies

PACK	CODE
40 Endokit strips and 80 pre-filled test tubes	08-8700N
40 Endokit	08-8710N

Grossing board

Grossing boards for the dissection of anatomical specimens. The single-use grossing boards are equipped with a millimeter scale.

DIMENSIONS	MATERIAL	PACK	CODE
15 x 21 cm	Cardboard	20 pcs.	08-8000 (single-use)
30 x 21 cm	Cardboard	20 pcs.	08-8010 (single-use)
30 x 42 cm	Cardboard	20 pcs.	08-8020 (single-use)

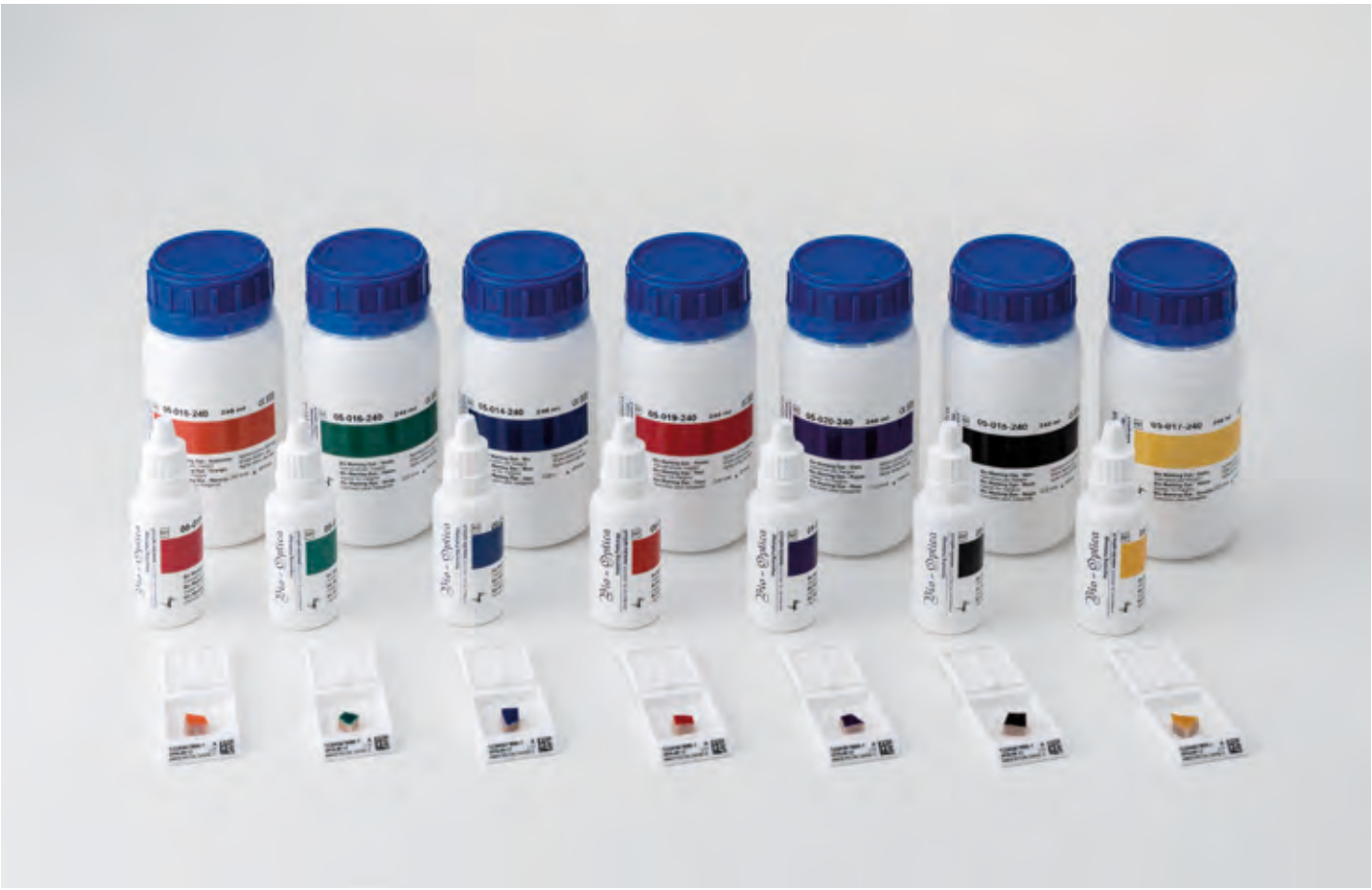


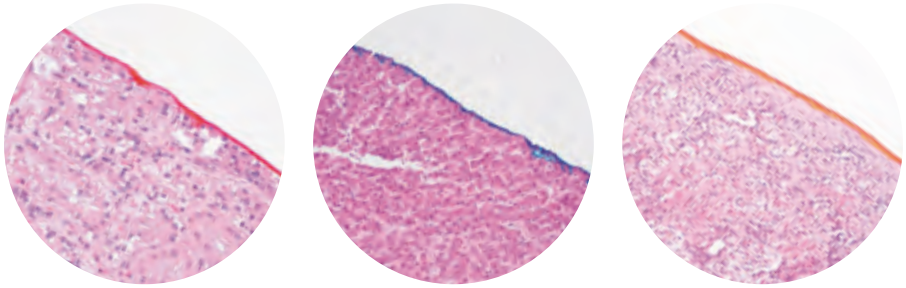
Bio-Optica

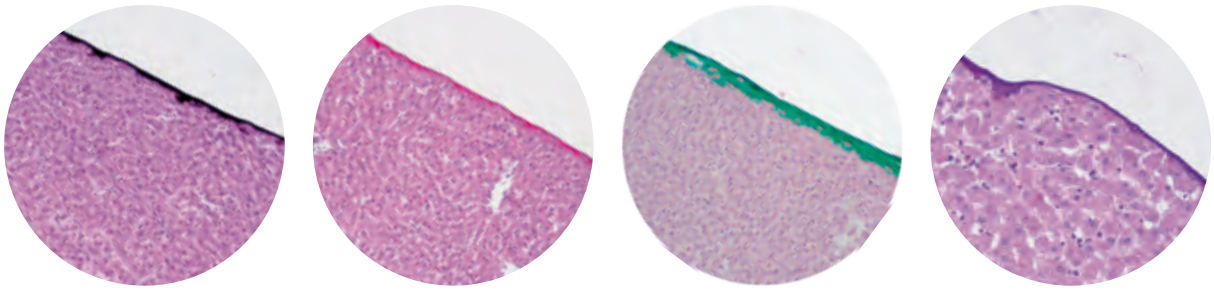
Bio Marking Dyes

Bio-Optica marking dyes are special, non-toxic inks, made with natural polymers, used to mark surgical margins.
The advantages of using Bio Marking Dyes are as follows:

- They are non-toxic and made with natural polymers
- They dry in 2-3 minutes
- They do not require any additional work phases in other solutions to fix the color
- They do not spread into the tissue
- They can be applied to fresh or fixed samples
- They do not release color into solutions during fixing and processing





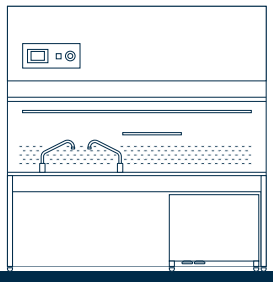


30 ml bottles with dispenser

COLOR	PACK	CODE
Blue	1 pc.	05-014-030-1
Black	1 pc.	05-015-030-1
Green	1 pc.	05-016-030-1
Yellow	1 pc.	05-017-030-1
Orange	1 pc.	05-018-030-1
Red	1 pc.	05-019-030-1
Violet	1 pc.	05-020-030-1

240 ml bottles

COLOR	PACK	CODE
Blue	1 pc.	05-014-240
Black	1 pc.	05-015-240
Green	1 pc.	05-016-240
Yellow	1 pc.	05-017-240
Orange	1 pc.	05-018-240
Red	1 pc.	05-019-240
Violet	1 pc.	05-020-240



Bio-Optica

Multi-purpose containers

Impact-resistant containers for the storage of small histological samples.

CAPACITY	PACK	CAP	CODE
40 ml	500 pcs.	Screw	07-M40
60 ml	500 pcs.	Screw	07-M60

Multi-purpose containers with hermetically sealed press cap for the storage of histological samples, serigraphed with hazard symbols and risk phrases for formalin.

CAPACITY	PACK	CAP	CODE
125 ml	250 pcs.	Press	07-7700
250 ml	200 pcs.	Press	07-7750
500 ml	100 pcs.	Press	07-7710
1000 ml	100 pcs.	Press	07-7720
3000 ml	50 pcs.	Press	07-7730
5000 ml	20 pcs.	Press	07-7740

Buffered neutral 10% formalin in pre-filled containers

CAPACITY	PACK	CAP	CODE
10 ml	80x5 ml	Screw	05-01P05
35 ml	54x9 ml	Screw	05-01V15P
55 ml	54x18 ml	Screw	05-01V30P
55 ml	54x28 ml	Screw	05-01V60P
125 ml	16x75 ml	Screw	05-01V125P16
250 ml	16x130 ml	Press	05-01V250P16
500 ml	6x300 ml	Press	05-01V500P
1000 ml	6x600 ml	Press	05-01V1000P
3000 ml	4x1.800 ml	Press	05-01V3000P
5000 ml	4x3.000 ml	Press	05-01V5000P

Ready-to-use formalin

PRODUCT	PACK	CODE
● **Buffered neutral 10% formalin**	4x2.5 l	05-01005Q
	1x5 l	05-01004F
	1x10 l	05-K01009
	1x20 l	05-K01004
● **Tap for tanks (10 and 20 l)**	1 pc	05-I348

Concentrated formalin

	PRODUCT	PACK	CODE
●	**38-40% formaldehyde**	4x 2.5 l	05-01007Q
		1x20 l	05-K01007
●	**Concentrated buffered neutral formalin**	1x10 l	05-K01004/CO

Other fixatives

	PRODUCT AND DESCRIPTION	PACK	CODE
●	**Bouin**	1x500 ml	05-M01008
	For bone marrow biopsies	4x2.5 l	05-01008Q
●	**Carnoy**	1x2.5 l	05-01013E
	Product of choice for glycogen		
●	**Hollande**	1x2.5 l	05-01030E
	Excellent for trichrome staining		

Decalcifying agents

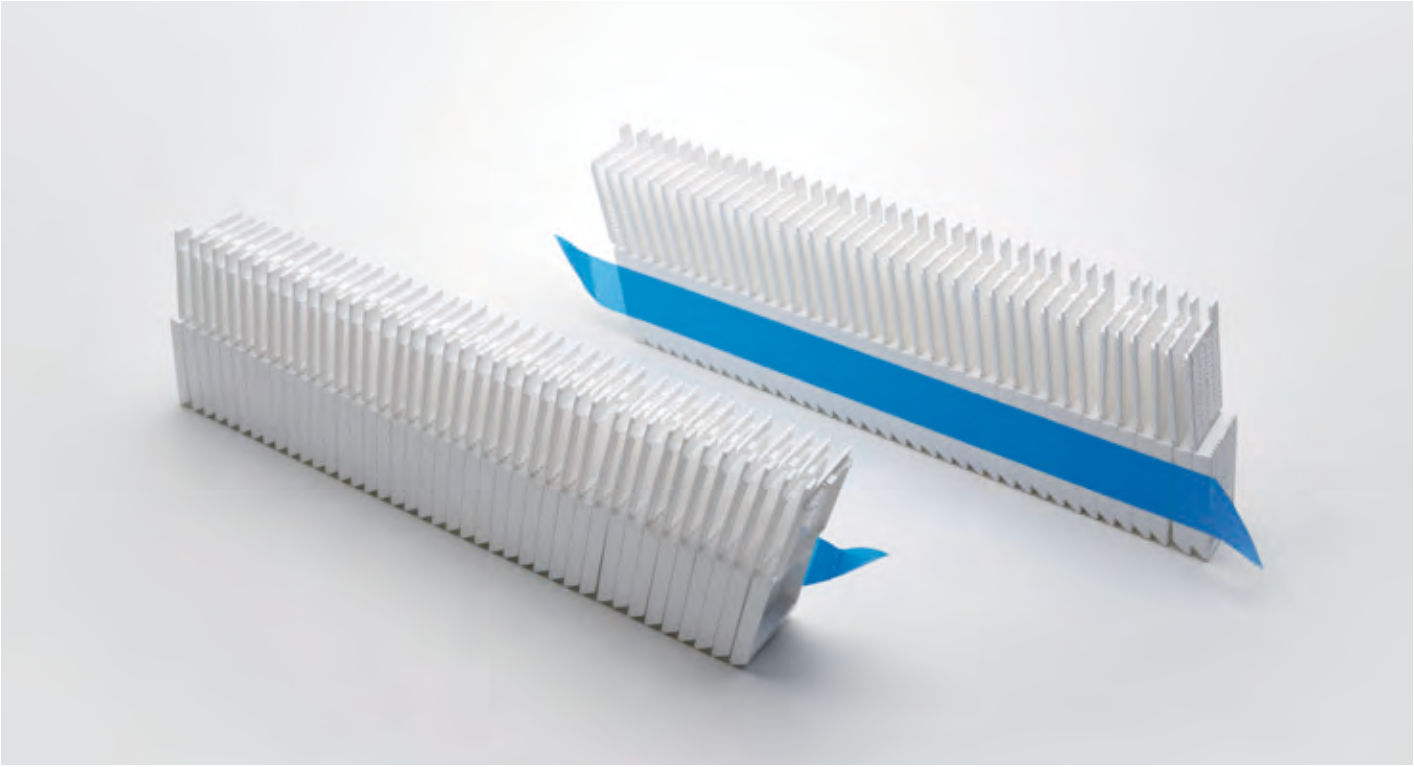
Decalcifying and/or fixative solutions for bone marrow biopsies and calcified tissues.

	PRODUCT AND DESCRIPTION	PACK	CODE
●	**Osteodec**	1x500 ml	05-M03005
	Decalcifying agent for bone biopsies	4x2.5 l	05-03005Q
●	**Biodec R**	1x500 ml	05-M03009
	Rapid decalcifying agent for mineralized tissue	4x2.5 l	05-03009Q
●	**Electrolytic decalcifying agent**	1x500 ml	05-M03004
	Decalcifying mixture comprising formic acid and hydrochloric acid	4x2.5 l	05-03004Q

Stacked Bio Cassettes with lid with tape for printers

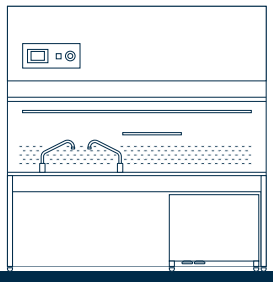
Bio Cassettes in polyacetal resin compatible with the main printing systems available on the market.

COLOR	PACK	CODE
White	40 stacks of 40 pcs.	07-9700
Orange	40 stacks of 40 pcs.	07-9710
Blue	40 stacks of 40 pcs.	07-9720
Yellow	40 stacks of 40 pcs.	07-9730
Lilac	40 stacks of 40 pcs.	07-9740
Pink	40 stacks of 40 pcs.	07-9750
Green	40 stacks of 40 pcs.	07-9760



COMPATIBILITY WITH COMMERCIALLY AVAILABLE WRITING SYSTEMS

CODE	PRIMERA	LEICA IPC	SAKURA SMART WRITE	SAKURA AUTO WRITE	THERMO PRINT MATE	HANDWRITING
07-9700	V	V	V	V	X	X
07-9710	V	V	V	V	X	X
07-9720	V	V	V	V	X	X
07-9730	V	V	V	V	X	X
07-9740	V	V	V	V	X	X
07-9750	V	V	V	V	X	X
07-9760	V	V	V	V	X	X



Bio-Optica

Bio Cassettes

- **Bio Cassettes (with lid)** Made of acetal resin for embedding standard samples.

COLOR	PACK	CODE
White	3x500 pcs.	07-7100
Orange	3x500 pcs.	07-7110
Blue	3x500 pcs.	07-7120
Yellow	3x500 pcs.	07-7130
Lilac	3x500 pcs.	07-7140
Pink	3x500 pcs.	07-7150
Green	3x500 pcs.	07-7160
Gray	3x500 pcs.	07-7180

- **Bio Cassettes II (with separate lid)**

COLOR	PACK LIDS + CASSETTES	CODE
White	1x2000 pcs. + 2x1000 pcs.	07-8100
Orange	1x2000 pcs. + 2x1000 pcs.	07-8110
Blue	1x2000 pcs. + 2x1000 pcs.	07-8120
Yellow	1x2000 pcs. + 2x1000 pcs.	07-8130
Pink	1x2000 pcs. + 2x1000 pcs.	07-8150
Green	1x2000 pcs. + 2x1000 pcs.	07-8160

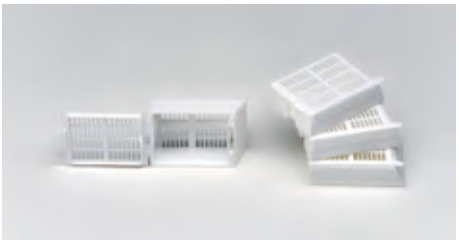
- **Biopsy Cassettes (with lid)** Acetal resin cassettes for embedding biopsies and small samples.

COLOR	PACK	CODE
White	3x500 pcs.	07-7200
Orange	3x500 pcs.	07-7210
Blue	3x500 pcs.	07-7220
Yellow	3x500 pcs.	07-7230
Pink	3x500 pcs.	07-7250
Green	3x500 pcs.	07-7260
Gray	3x500 pcs.	07-7280

- **Biopsy Cassettes II (with separate lid)**

COLOR	PACK LIDS + CASSETTES	CODE
White	1x2000 pcs. + 2x1000 pcs.	07-8200

Mega Cassettes (double height, with lid)



COLOR	PACK	CODE
White	750 pcs.	07-7300

Super Mega Cassettes (for large samples with separate lid)

Designed with larger mesh to increase the contact surface of the paraffin and prevent the sample from detaching during microtome cutting.

COLOR	PACK	DIMENSIONS	CODE
White	200 pcs.	70x50x15 mm	07-7000

Embedding Cassettes

Acetal resin cassettes with round holes, for use with metal lids.

DESCRIPTION	PACK	CODE
White cassettes	3x1.000 pcs.	07-7350
Metal lid	10 pcs.	07-086-74195

Biopsy pads and Histoshield

Foam pads made of special material that is permeable to solvents and paraffins. They facilitate the processing of very small samples without any risk of loss of material.

PRODUCT AND COLOR	PACK	CODE
Biopsy pads Blue	500 pcs.	07-7290
Biopsy pads Black	5000 pcs.	07-7291
Histoshield for laser printers	500 pcs.	07-7292

Biopsy bags

Fine-mesh polyester bags, resistant to paraffin and solvents. Ideal for processing small histological samples.

DIMENSIONS	PACK	CODE
30x45 mm	1000 pcs.	07-00005
45x60 mm	1000 pcs.	07-00003

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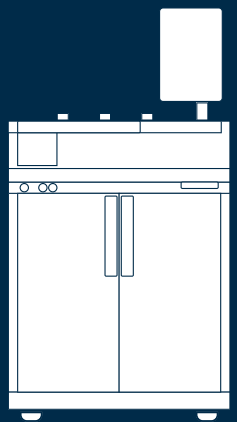


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solvent for Histology
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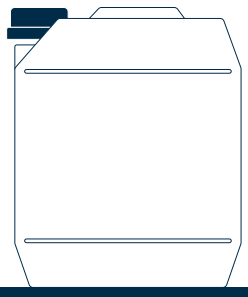
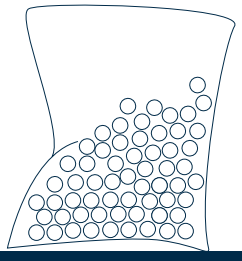
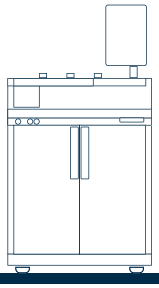






Bio-Optica

B-PRO450 – Automatic vacuum tissue processor

#beprofessional

The B-PRO450 is a floor-standing automatic vacuum system designed for routine processing of histological samples.

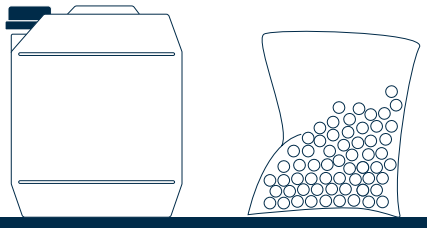
15 Tanks System: This means that you don't have to reduce steps in your conventional protocols. Using a single protocol for all types of samples, you can save time and improve the quality of results.
B-PROtocols: certified tested protocols, providing high level of standardization (IVDR compliant).
#B-Support: be always connected to the technical assistance department: real-time remote support.
B-CHECK: initial self-diagnosis that prevents possible failures.
Process reliability: integrated APC (Automated process completion) system as warranty of the process completion.
Operator safety: double filtration system and anti-burning technology (ABT): a solid wax discharge mechanism.
Easy to charge: 3 paraffin pre-melting elements.
RFID reagent traceability: the processing is guaranteed by the unique traceability of the reagents using RFID technology.
B-Friendly: an integrated 15' touch screen with a simple and intuitive graphical user interface, making it easy to use and manage.
Safe reagents loading system: 3 optical sensors for the partial loading; 1 optical sensor to control the overflow.

- **Characteristics**

Dimensions:	850 x 750 x 1650 mm (W x D x H)
Weight:	250 kg
Operating capacity:	Up to 450 cassettes per cycle
Number of storable protocols	20 programs (4 IVDR certified, 2 washing and 1 reverse)

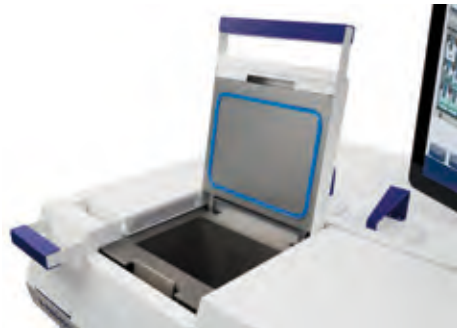
PRODUCT	CODE
Tissue Processor B-PRO450	40-100-200

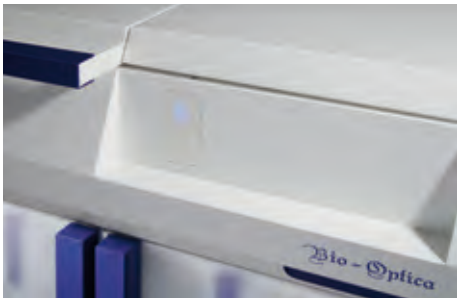
ACCESSORIES FOR B-PRO450	CODE
Activated carbon filter kit	450011
Uninterruptible power supply	65-SL3000
Collector for external vapour waste (Ø 100mm)	40-500-061

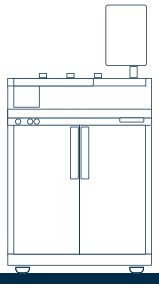


Pre-filled tanks

PRODUCT	PACK	CODE
Formalin 10% buffered	5 l x 1 tank	450001
Distilled water	5 l x 1 tank	450003
B-Alcohol 70 per B-PRO 450	5 l x 1 tank	450004
B-Alcohol 95 per B-PRO 450	5 l x 1 tank	450005
B-Alcohol 100 per B-PRO 450	5 l x 1 tank	450006
X-free	5 l x 1 tank	450007
Xilene	5 l x 1 tank	450009
Paraffin disposal tank	5 l x 1 tank	450010
BioWax - Paraffin	3,8 kg x 3 bag	450012







Bio-Optica

Dehyol 70

A 70° alcohol mixture that makes an ideal substitute for 70° ethanol in all histology/cytology procedures.

PACK	CODE
1x5 l	06-10075F
4x2.5 l	06-10075Q

Dehyol 95

A 95° alcohol mixture that makes an ideal substitute for 95° ethanol in all histology/cytology procedures.

PACK	CODE
1x5 l	06-10070F
4x2,5 l	06-10070Q

Dehyol Absolute

An absolute alcohol mix that makes an ideal substitute for absolute ethanol in all histology/cytology procedures.

PACK	CODE
1x5 l	06-10077F
4x2,5 l	06-10077Q

AlcoolPath 95

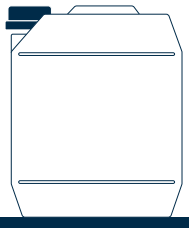
A 95° alcohol mix comprising ethyl alcohol.

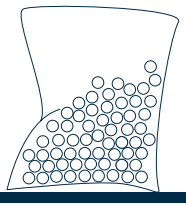
PACK	CODE
1x5 l	06-10031F
4x2,5 l	06-10031Q

AlcoolPath Absolute

An absolute alcohol mix comprising ethyl alcohol.

PACK	CODE
1x5 l	06-10030F
4x2,5 l	06-10030Q





Unyhol

Unyhol is an alcohol mix formulated to prevent excessive dehydration of samples and to substitute the full range of alcohol concentrations.

PACK	CODE
1x5 l	06-10071F
4x2,5 l	06-10071Q

Bio Clear

Clearing reagent of natural origin, formulated to replace xylene in the processing, de-waxing and dehydration of slides.

PACK	CODE
4x2,5 l	06-1782Q

Isopar Ultra

Clearing Isoparaffinic solvent, formulated to replace xylene in the processing, de-waxing and dehydration of slides.

PACK	CODE
1x5 l	06-1306F

Xylene for histological applications

Xylene-based solvent for histology and cytology procedures.

PACK	CODE
4x2,5 l	06-1304Q
1x5 l	06-1304F

X-Free

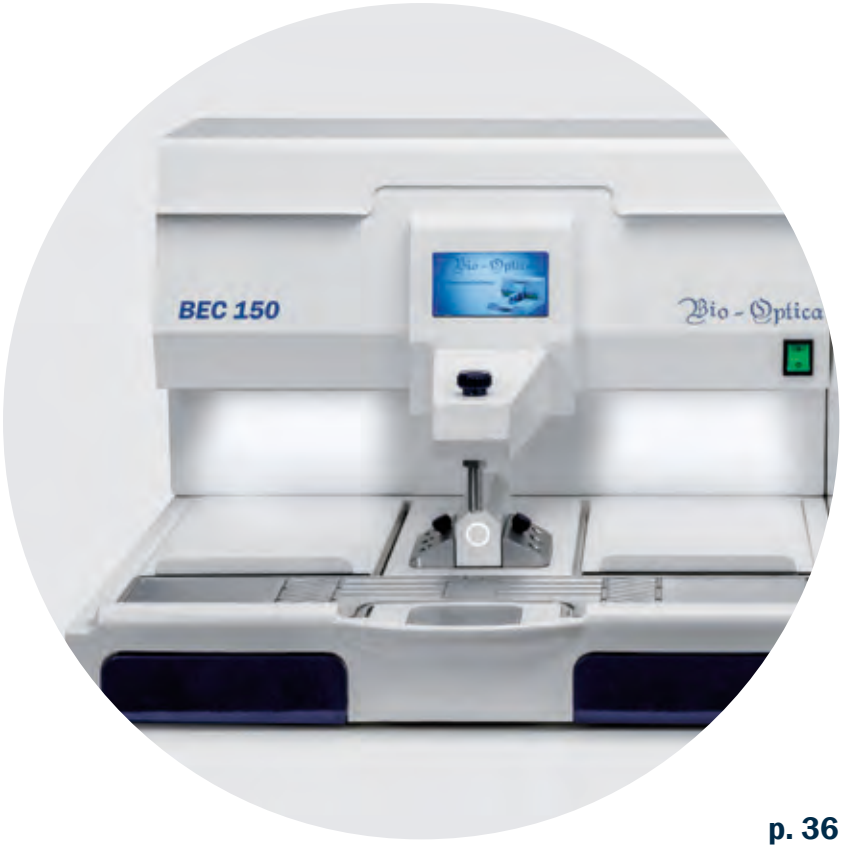
A xylene substitute solvent for use in histology and cytology procedures.

PACK	CODE
4x2.5 l	06-1305Q
5 l	06-1305F

Bio-Wax Paraffin

Mixture of pure paraffin (aliphatic hydrocarbons) and additive polymers (concentration: 0.3%) for histological samples embeddings. DMSO-free.

DESCRIPTION	MELTING POINT	PACK	CODE
Bio-Wax Parafin	56÷58°C	8 bags x 1kg	08-7960



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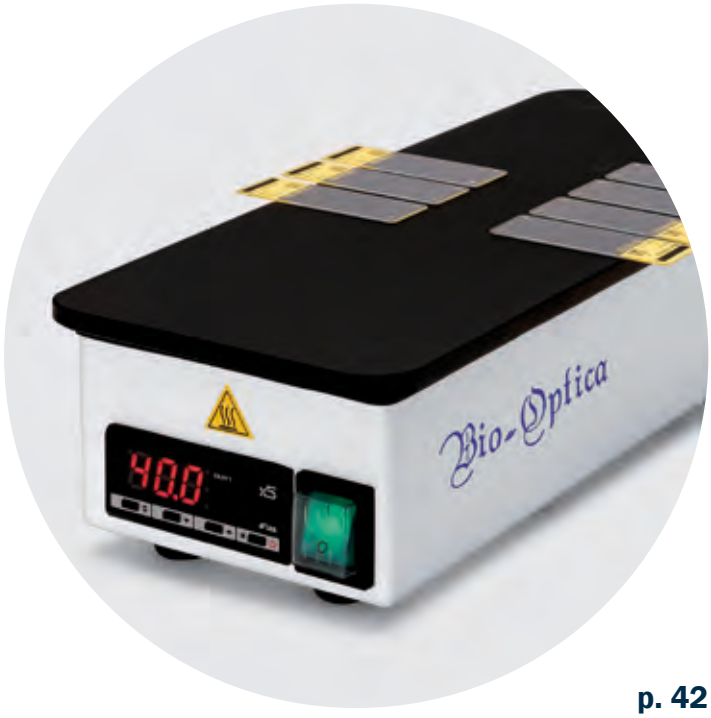

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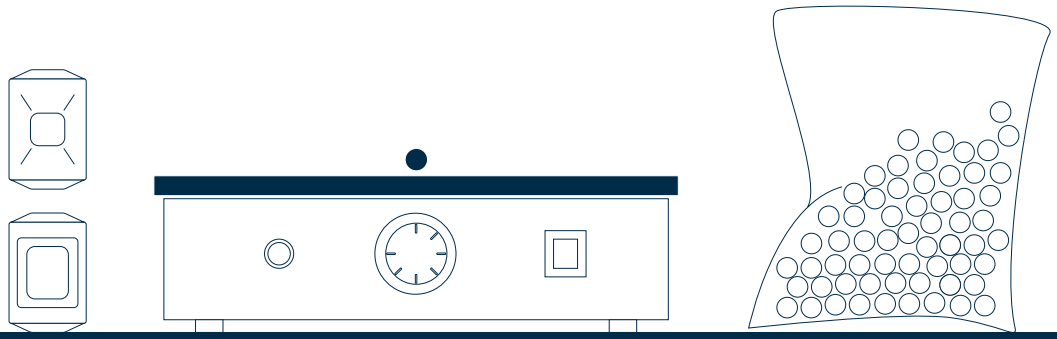


Embedding station

Modular specular system for embedding histological samples in paraffin.
Comprises two separate units:

- Paraffin dispenser and thermal unit
- Cooling plate

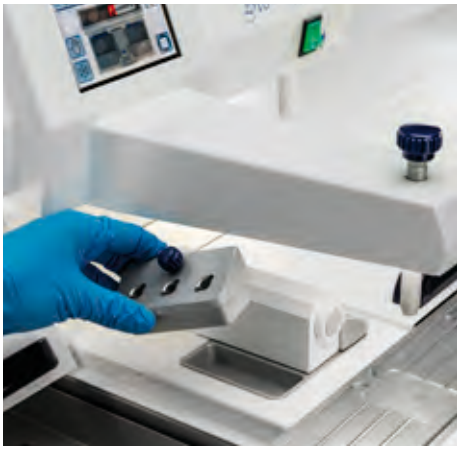
The operating parameters, switch-on and switch-off of the two modules can be programmed separately.

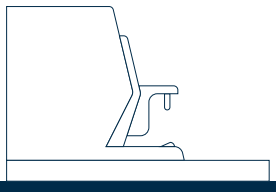
The BEC150 paraffin dispenser is equipped with the following:

- Proximity sensor for dispensing paraffin, with flow control function
- 6 heated, pull-out holders for forceps
- 2 paraffin collection drawers with disposable containers
- Peltier spot capable of accommodating embedding molds for large samples
- Double thermal unit capable of accommodating the racks of any floor-standing processor
- Double jack for heated forceps or pestle
- Touch-screen monitor
- Fully lit work surface

Accurate thermostatic control of the paraffin tank and work plate, and separate heating of the dispensing nozzle keep the operating temperature constant at all times.

The BCP170 cooling plate can accommodate up to 70 standard embedding cassettes and can be positioned on the right or the left of the paraffin dispenser according to the needs of the operator.
The dispenser can be ordered with the optional BCP230 cooling plate.





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BEC150

- **Characteristics**

Overall dimensions:	560 x 605 x 405 mm (W x D x H)
Total weight:	18 kg
Heated plate:	anodized aluminum, surface 517 x 120 mm (w x d)
Paraffin tank:	aluminum, volume 4 liters approx
Chambers (two) for processor racks with removable tank:	aluminum, surface 225 x 160 mm (W x D)
Peltier plate dimensions:	80 x 65 mm
Adjustment range:	heated elements: +20°C to +75°C Peltier plate: -3°C

BEC170

- **Characteristics**

Overall dimensions:	410 x 605 x 405 mm (W x D x H)
Cooling surface dim.	370 x 350 mm (W x D)
Total weight:	24 kg
Temperature:	Working Temperature fixed at -10°C

BEC230

- **Characteristics**

Overall dimensions:	410 x 605 x 405 mm (W x D x H)
Cooling surface dim.	370 x 350 mm (W x D)
Total weight:	24 kg

PRODUCT	CODE
BEC150 paraffin dispenser	40-200-002
BCP170 cooling plate	40-300-202
BCP230 cooling plate	40-300-203

ACCESSORIES	CODE
Heated forceps – size 1 mm - red	40-200-062
Heated forceps smooth – spare forceps size 2 mm - yellow	40-200-063
Heated forceps serrated – spare forceps size 4 mm - blue	40-200-064
Heated Tamper – size 8x8 mm	40-200-065
Heated Tamper – size 16x16 mm	40-200-066
Heated Tamper – size 28x25 mm	40-200-067
Foot switch	40-200-060
Magnifier lens - (code 40-200-068 required)	40-200-061
Support for Magnifying Lens	40-200-068
Wax scraper	40-200-070
Paraffin recovery tray	40-200-071

Steel embedding molds

Stainless steel molds for embedding histological samples in paraffin.

- **Bio Mold**

MOLD DIMENSIONS	PACK	CODE
7 x 7 x 5 mm	12 pcs.	07-BM775
15 x 15 x 5 mm	12 pcs.	07-BM15155
24 x 24 x 5 mm	12 pcs.	07-BM24245
30 x 24 x 5 mm	12 pcs.	07-BM30245
37 x 24 x 5 mm	12 pcs.	07-BM37245

- **Mega Mold**

MOLD DIMENSIONS	PACK	CODE
33 x 24 x 12 mm	6 pcs.	07-MBM6

- **Super Mega Mold**

MOLD DIMENSIONS	PACK	CODE
65 x 45 x 15 mm	10 pcs.	07-7010

PVC dispomold

Single-use, PVC embedding molds.

MOLD DIMENSIONS	PACK	CODE
7 x 7 x 5 mm	1500 pcs.	07-MP7070
15 x 15 x 5 mm	1500 pcs.	07-MP1515
24 x 24 x 5 mm	1500 pcs.	07-MP2424
30 x 24 x 5 mm	1500 pcs.	07-MP3024
37 x 24 x 5 mm	1500 pcs.	07-MP3724

BCP230 freezing plate

Cooling plate equipped with a work tray with 48 mm high edge, designed to provide a refrigerated chamber and not just a cold work surface.
The chamber is equipped with a lid.
The advantages of this solution are as follows:

- High cooling power
- No condensation on the work surface or dripping on the bench
- Ability to cool a larger number of paraffin-embedded blocks (up to 300 approx) thanks to the special guides, which are available to order.

Characteristics

Dimensions:	410 x 600 x 385 (L x W x H)
Weight:	30 kg
Capacity:	up to 300 cassettes approx
Operating temperature:	to -20 °C
Cooling system:	CFC-free

PRODUCT	CODE
BCP230 freezing plate	40-300-203

WB1770 water bath

The WB1770 water bath is equipped with a removable Pyrex basin which is easy to fill with water and empty, and safer and more practical to use.
The temperature is controlled by a probe in direct contact with the water, which ensures absolute precision. It is equipped with a heated upper work surface capable of accommodating up to 24 slides.

- **Characteristics**

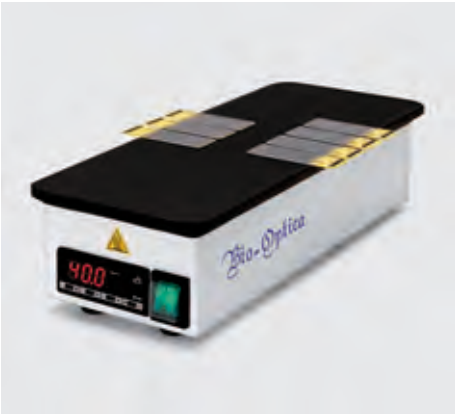
Dimensions:	350 x 365 x 155 mm (L x W x H)
Dimensions of slide-drying surface:	350 x 100 mm
Weight:	8 kg
Thermostat:	electronic thermostat with digital display
Bath temperature:	+20°C to +70°C
Temperature sensor:	NTC10K probe immersed directly in the water with movable arm
Basin lighting:	6 Watt neon lamp
Slide plate temperature:	+20°C to +50°C

PRODUCT	CODE
WB1770 water bath	40-300-000

WB100 round water bath

The WB100 round water bath is small, simple and reliable.
It is equipped with an analog thermostat, heating indicator light and wide heated surface for 24 slides.
Dimensions mm 345x100 (ø x h) and dimensions of internal basin mm 225x50 (ø x h).

PRODUCT	BATH TEMPERATURE	CODE
WB100 round water bath	+30 °C to +80 °C	40-300-002



PC800 hot plate

The PC800 hot plate can dry 30 slides simultaneously.
It is equipped with an anodized aluminum work surface and digital electronic thermostat.
The temperature is adjustable up to 90 °C.

PRODUCT	DIMENSIONS	CODE
PC800 plate	150 x 380 x 100 mm	40-300-301

Brushes

For microtomy and cryo-microtomy.

PRODUCT	PACK	CODE
Small for collecting biopsies	4 pcs.	08-0822
Small for collecting microtome sections	4 pcs.	08-0823
Medium for collecting microtome sections	4 pcs.	08-0824
Medium for microtome blade cleaning	2 pcs.	08-0825
Large for microtome cleaning	2 pcs.	08-0826
Large for cryostat cleaning	2 pcs.	08-0827
Set of 5 cryostat brushes (Includes codes 0822-0823-0824-0825-0827)	1 pc.	08-0828
Set of 5 microtome brushes (Includes codes 0822-0823-0824-0825-0826)	1 pc.	08-0829

BioParaFree

De-waxing solution in spray form, completely odorless, for cleaning paraffin residues from microtomes, embedding stations and work benches.
Supplied in a bottle with nebulizer.

PACK	CODE
1x100 ml	08-1750

Killik

Non-toxic embedding medium for the preparation of histological tissue for cryostat cutting.

COLOR	PACK	CODE
Neutral	4x100 ml	05-9801

Crio Clor 0,3

Cryostat disinfectant spray comprising chlorhexidine (0.3%), effective against bacteria, fungi and other viruses (hepatitis B, poliomyelitis, herpes simplex).

PACK	CODE
1x125 ml	05-9802

Cryo-Spray

Histological freeze spray: for fast freezing of tissues for cryostat cutting, and for cooling paraffin-embedded samples before microtome cutting.
The new formulation is non-flammable and contains no fluorinated gases.
It is therefore safe for the environment and for operators.

PACK	CODE
12x150 ml	08-SPRAY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AlcoolPath 95
UN 1987

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CVR 909
Plus
AUS 240
Plus
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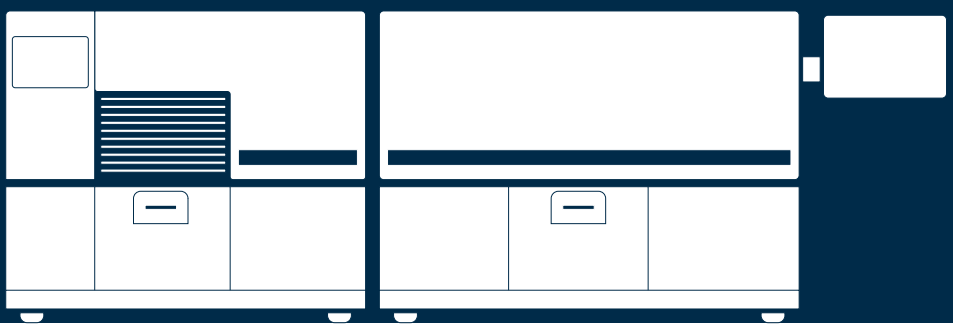


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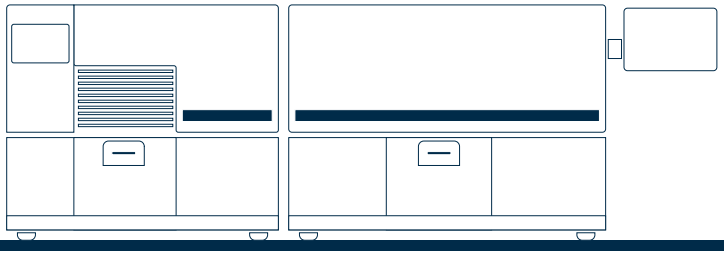


Bio - Optica

AUS240 PLUS Automatic Stainer

The AUS240 PLUS is an automated histology stainer with X-Y-axis transfer arm, fully programmable and suitable for all histo-cytological stains, both routine and special. It can perform multiple staining processes simultaneously. Their number is limited only by the number of dishes available (indicatively 10-12 processes).
Continuous loading of racks of 30 slides, with throughput dependent on the staining protocol. Equipped to impart a waving movement on the reagent dishes so as to reduce the quantity of precipitates in the dishes, thus keeping the reagent fresh at all times. The AUS240 can be integrated with the CVR 909, the automatic coverslipper.

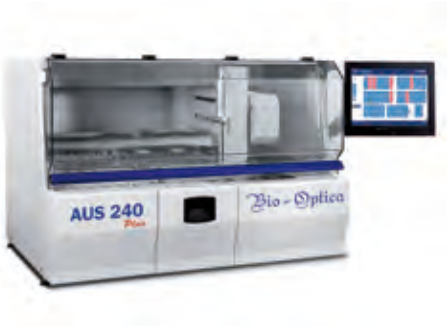
- **Characteristics**

Overall dimensions:	1220 x 780 x 770 mm (L x W x H)
Monitor:	+ 400 mm (l)
Total weight:	155 kg
Reagent work stations:	28
Water work stations:	5
Heated drying stations:	2 (60°C)
Unloading stations:	3
Loading stations:	2
Dish capacity:	485 ml
Slide rack:	capacity 30 slides
Number of programs:	up to 18 programs of over 100 steps each
Programmability:	each station can be set with an immersion time of 1” to 99’59” (with tolerance of 1”)
Interface:	large color touch-screen monitor for displaying the progress of work protocols, the layout of the process baths and all parameters relating to the staining cycles in progress
Safety:	Efficient, integrated fume filtration system

PRODUCT	CODE
AUS240 PLUS automatic stainer	40-400-350

Stainings optimized for the instrument

PRODUCT	PACKAGING	CODE
Mayer hematoxylin	2,5 l	05-06002E
Eosin Y alcoholic solution 0,5%	2,5 l	05-10009E
Papanicolaou Harris hematoxylin	2,5 l	05-12011E
Papanicolaou EA50	2,5 l	05-12019E
Papanicolaou OG6	2,5 l	05-12013E
Giemsa	1500 tests	04-257000

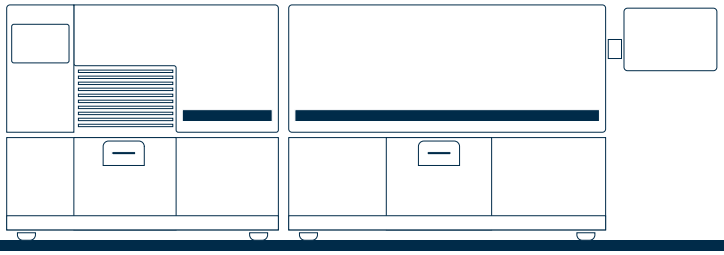


Special Stainings optimized for the instrument

PRODUCT	PACKAGING	CODE
Alcian blue pH 2,5	1x1 l	04-160802/L
Alcian blue pH 2,5 PAS	1x1 l	04-163802/L
PAS	1x1 l	04-130802/L
Ziehl Neelsen Fite	1x1 l	04-111802/L

CVR909 PLUS Automatic Coverslipper

The CVR909 automatic coverslipper is the only instrument on the market that arranges the coverslipped slides directly on handy stackable trays, which are resistant to chemical reagents. The instrument is easy to use and specifically developed to facilitate routine laboratory operations. Continuous cleaning of the dispenser needle ensures high-quality coverslipping. The barcode reader ensures that all laboratory processes are fully traceable. Integrated with the AUS240 stainer, the coverslipper fully automates the process of de-waxing, staining and mounting of samples. It is possible to use three different sizes of coverglass (24x40 - 24x50 - 24x60) and to set the mounting medium quantity and dispensing mode.



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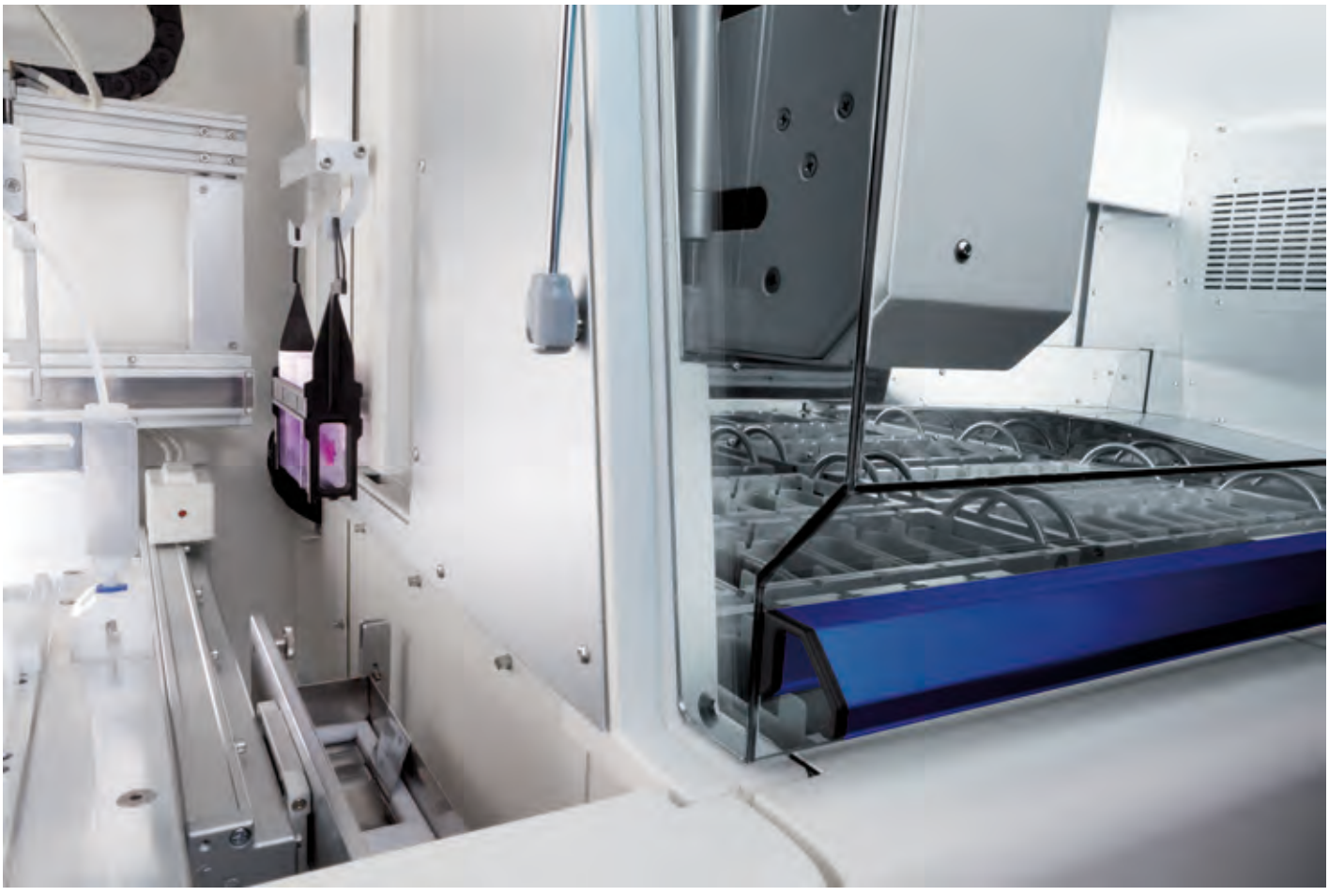
Characteristics

Overall dimensions:	860 x 780 x 770 mm (L x W x H)
Total weight:	80 kg
Throughput:	180 slides/hour (directly on tray)
Mounting medium:	500 ml container
Output of mounted slides:	9 trays of 10 slides each (total: automated output of 90 slides without operator intervention)

PRODUCT	CODE
CVR909 PLUS automatic coverslipper	40-500-000



Bench Tech benchtop fume hood

Laboratory fume hood with extraction from top and front, to be used for manual staining, slide mounting or as an area for liquid transfer.
It is suitable for any laboratory benches.

- **Characteristics**

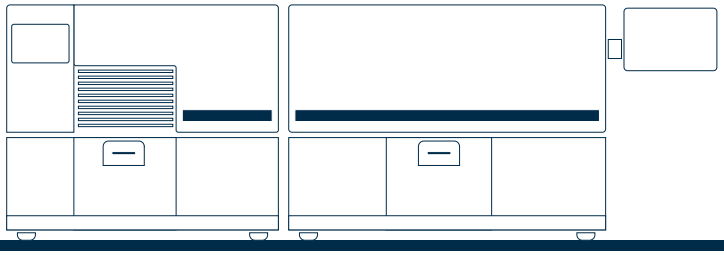
Extractor system:	1 three-phase spark-proof adjustable electric extractor fan
Lighting:	2 LED tubes, total 1500 lux
Control panel:	touch-screen monitor for the control and display of all functions

PRODUCT	DIMENSIONS	CODE
Benchtop fume hood 90	900 x 750 x 1340 mm	50-090-201
Benchtop fume hood 130	1300 x 750 x 1340 mm	50-130-201
Benchtop fume hood 150	1500 x 750 x 1340 mm	50-150-201

Filters

The filters are easy to change thanks to the handy Bio-Optica system with removable front panel. This system is used in all Bio-Optica fume hoods.

PRODUCT	CODE
HEPA filter	50-F005
UV lamp with auto switching off	50-500-057
Synthetic pre-filter	50-F007
Filter for solvents	50-F018
UV lamp replacement	50-500-070



Bio - Optica

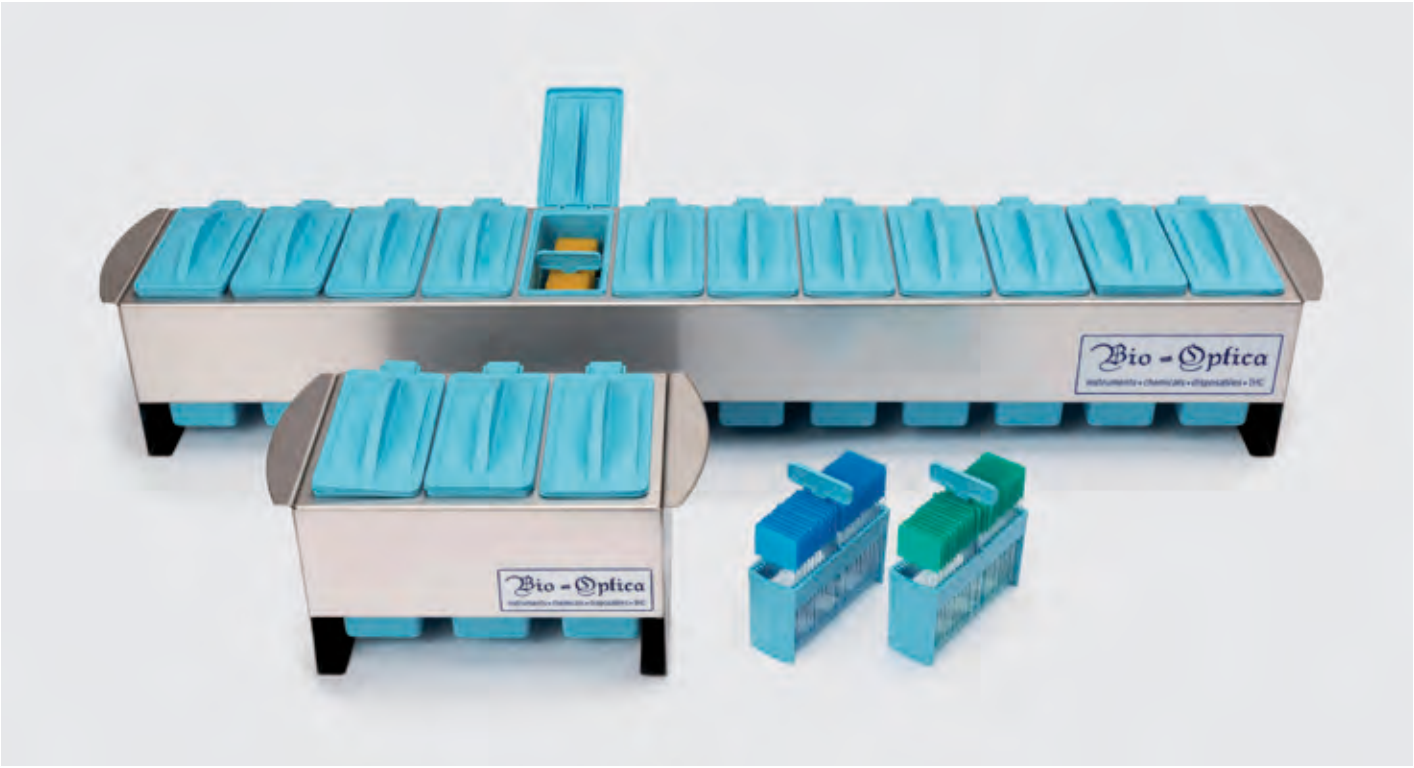
Manual staining set

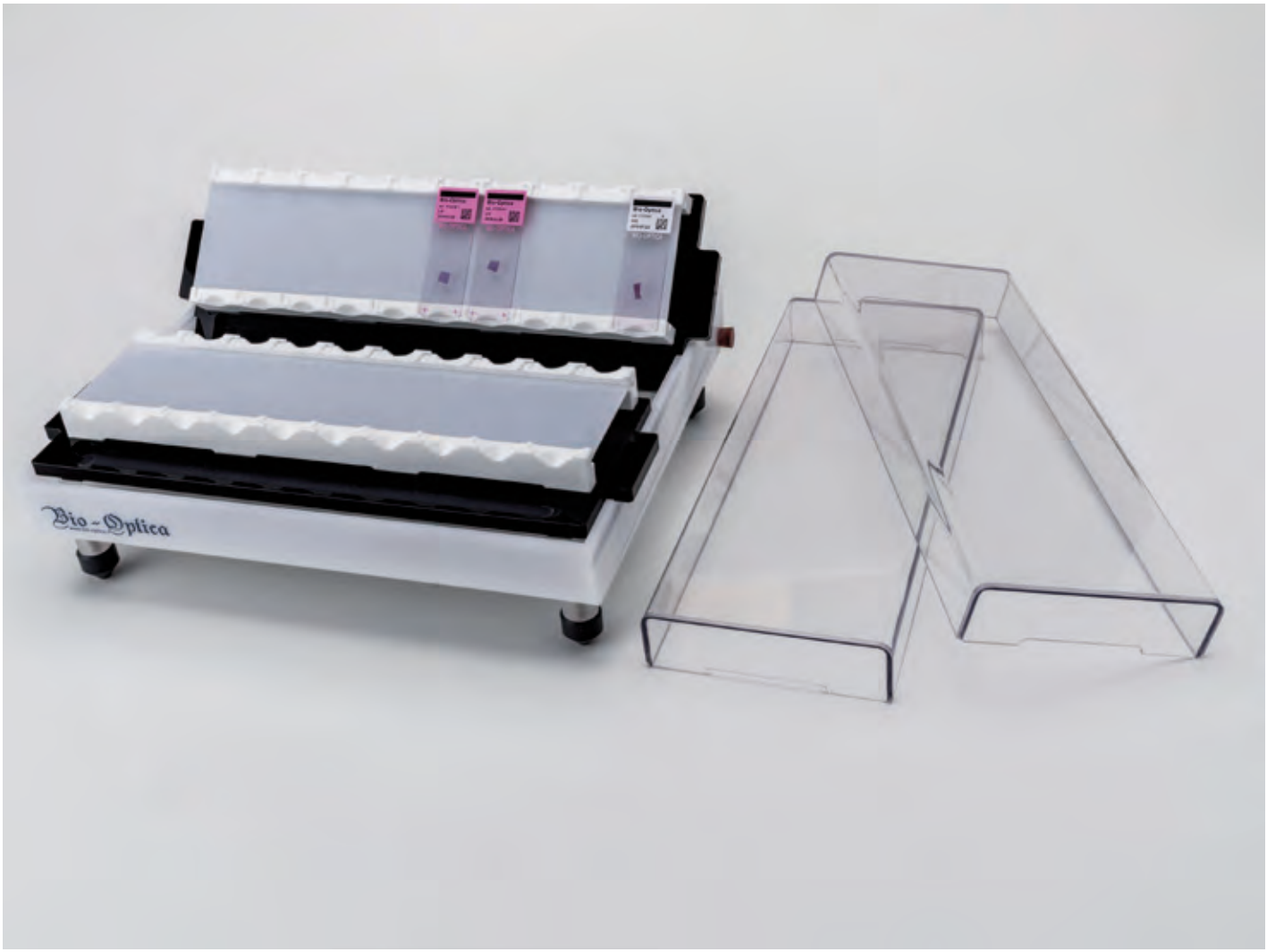
The simplest and most economical cyto-histological staining system, made of thermoplastic resin: the 10-10 manual staining set consists of twelve dishes with lid (capacity 300 ml or 80 ml) in a steel structure and a slide-rack for twenty-five slides. The hematology version consists of just three dishes with lid and one slide-rack. The dishes and rack are resistant to solvents and high temperatures (up to 170 °C) and can be used in microwave ovens.

PRODUCT	No. OF DISHES	CAPACITY of each dish	CODE
Hematology set	3	300 ml	10-20
Hematology set	3	80 ml	10-21
Staining set	12	300 ml	10-10
Staining set	12	80 ml	10-11

PARTS AND ACCESSORIES

PRODUCT	No. OF DISHES	CAPACITY of each dish	CODE
Dish with lid attached	12 pcs.	300 ml	10-30
Dish with separate lid	12 pcs.	300 ml	10-33
Dish with separate lid	12 pcs	80 ml	10-34
Rack for 25 slides with plastic handle	6 pcs.		10-42
Steel slide basket for 8 slides	1 pc		10-44

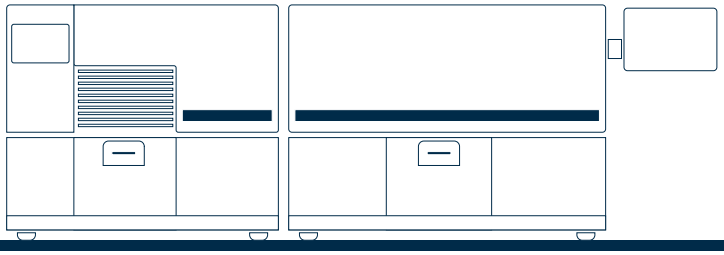




Slide master for special and immunohistochemistry staining

Slide Master is the ideal manual stainer for special and immunohistochemistry staining. Equipped with 20 stations, humid chamber and lid, it allows horizontal incubation and inclined washing.
The adjustable feet and spirit level help keep the work surface totally horizontal.

DIMENSIONS	CODE
32 x 26 x 11 (L x W x H) cm	15-MEQ001



Bio-Optica

Timer

Solvent-resistant laboratory timer.

MODEL	PACK	CODE
Digital electronic	1 pc.	44-06057A000

Bench surface protection paper

Bench surface protection paper for all laboratory requirements.

PRODUCT	DIMENSIONS	PACK	CODE
Plastic-coated paper	48 x 60 cm	100 pcs.	08-CA2000
Filter paper	50 x 50 cm	500 pcs.	08-656

Slide adapter for large samples

For use in conjunction with racks for automatic and manual stainers for staining slides with large samples together with standard slides.

PRODUCT	PACK	CODE
Slide adapter for large samples	1 pc.	40-400-267

Pap Pen

Deposits a waxy water-repellent film on slides to outline the staining area.

PRODUCT	TIP DIAMETER	PACK	CODE
Liquid Blocker	5 mm	1 pc.	11-100
Liquid Blocker Mini	2 mm	1 pc.	11-100M

Histology pen

Pen with special permanent ink that remains color-fast during processing to ensure reliable identification of preparations.
Writes on glass, metal, porcelain and plastic.

COLOR	PACK	CODE
Black	12 pcs.	11-50

Tube Checker

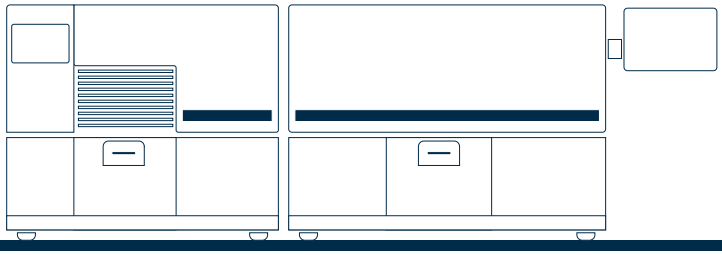
Special ink pens for permanent marking of embedding cassettes.
The ink is resistant to alcohol and xylene.
The pens are equipped with two tips, one fine and one broad.

COLOR	PACK	CODE
Black	1 pc.	11-400

Pen with diamond tip

For permanent engraving of slides.

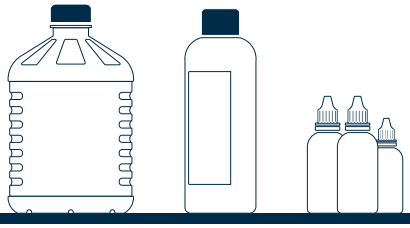
PRODUCT	PACK	CODE
With hexagonal aluminum handle	1 pc.	08-DS2F



Bio-Optica

Microscope slides

Cleaned, degreased, high-quality, original Bio-Optica microscope slides; cellophane-wrapped and free from dust, dirt and cracks.
Resistant to enzyme treatments and microwaves (750-800 Watts).
Dimensions: 25.5 x 75.5 mm.



	EDGE	BAND	PACK	CODE
●	Cut	Frosted	2500 pcs.	09-1000TB
●	Ground 90°- beveled corners 45°	Neutral	2500 pcs.	09-1000M
●	Ground 90°- beveled corners 45°	Frosted	2500 pcs.	09-1000MB
●	Ground 90°- beveled corners 45°	Pink	2500 pcs.	09-1000
●	Ground 90°- beveled corners 45°	Blue	2500 pcs.	09-1010
●	Ground 90°- beveled corners 45°	Green	2500 pcs.	09-1020
●	Ground 90°- beveled corners 45°	White	2500 pcs.	09-1030
●	Ground 90°- beveled corners 45°	Yellow	2500 pcs.	09-1040
●	Ground 90°- beveled corners 45°	Orange	2500 pcs.	09-1050
●	Ground 90°- beveled corners 45° positively charged	White	72 pcs.	09-3000

COMPATIBILITY WITH COMMERCIALLY AVAILABLE WRITING SYSTEMS

CODE	HANDWRITING	LASER PRINTER	THERMO PRINTERS	LEICA PRINTER
09-1000MB	V	X	X	X
09-1000	V	V	V	X
09-1010	V	V	V	X
09-1020	V	V	V	X
09-1030	V	V	V	X
09-1040	V	V	V	X
09-1050	V	V	V	X
09-3000	V	V	V	X

Microscope slides for big sections

Cleaned, degreased, high-quality, original Bio-Optica microscope slides.
Dimensions: 52 mm x 76 mm and thickness: 1-1.1 mm.

EDGE	BAND	PACK	CODE
Ground 90°- beveled corners 45°	Double Frosted	1250 pcs.	09-7000

SPECIAL STAINS GUIDE

This section offers a comprehensive range of high-quality staining solutions designed to enhance the visualization of cellular and tissue structures in histology and cytology samples. Our products ensure precise, reliable, and reproducible results, aiding in accurate diagnosis and research. Additionally, you will find detailed information about staining methods, expected results, and product codes to facilitate your selection process.

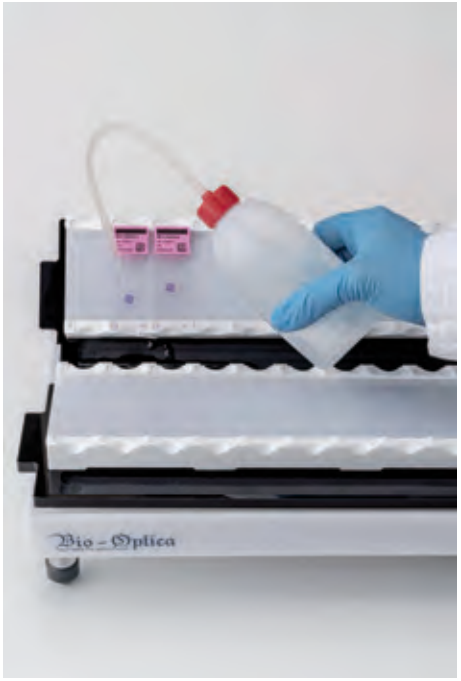
Manual staining kit

Bio-Optica staining kits have earned ever wider acclaim in Italy and throughout the World for a number of specific reasons, including:

- Quick and easy to use
- Reproducible results
- Predictable cost
- User safety
- Limited environmental impact

Nevertheless, Bio-Optica is committed to continuous improvement of its products and their protocols for use, thanks in part to feedback from our customers, which help us uphold the highest standards of quality for our products.

GENERAL WARNINGS



For best results, please read the following guidelines.

Minimum number of tests that can be performed

The number of tests is calculated by assuming reagent consumption of 10 drops per test, which is more than sufficient to cover even medium-large sections. If you wish to use a smaller number of drops when working with small samples, you must reduce the quantity of each reagent in the same proportion in order to avoid imbalances.

Completion time

The completion time is calculated according to the duration of the individual steps of which the method consists. It does not include the time taken for de-waxing, hydrating and dehydrating the section.

Essential basic equipment

To complete the kit, you will need the following essential basic equipment:

- Slide Master, code 15-MEQ0001, for horizontal slide staining
- Spray bottle containing distilled water to perform the steps required by the protocol
- Two series of solvents:
  descending for de-waxing the sections and bringing them to the water and ascending to dehydrate and diaphanize the section before mounting with coverglass.

We recommend the use of BioMount HM (codes 05-BMHM100 or 05-BMHM508) as the mounting medium.

Additional equipment

The individual instructions indicate which equipment not included in the kit, but usually available in the laboratory, is necessary to complete the kit.

Fixatives and embedding media

The protocol times were determined on histological sections of fragments fixed in formalin buffered to pH 7 with phosphate buffer and subsequently embedded in paraffin.

Bio-Optica

Afog

PRODUCT AND APPLICATION	CODE
Afog Acid Fuchsin Orange G	04-021002

Minimum number of tests that can be performed	100
Completion time	22 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Not required

Application

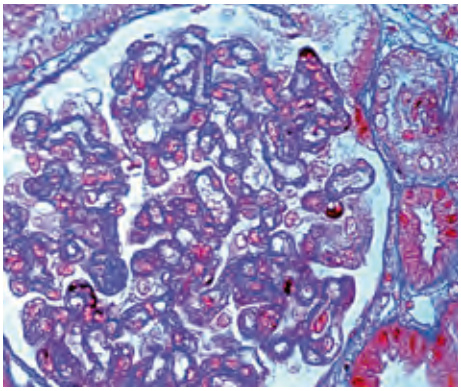
Reference method for highlighting protein deposits in renal biopsy.
Recommended fixative: Bouin.

Method

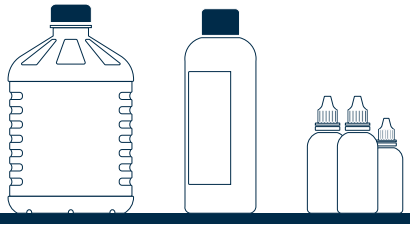
- 1) Bring the section to the distilled water.
- 2) Dispense 5 drops of reagent A and 5 drops of reagent B onto the section: leave to act for 10 minutes.
- 3) Tap water for 5 minutes.
- 4) Dispense 10 drops of reagent C onto the section: leave to act for 5 minutes.
- 5) Wash in distilled water.
- 6) Dispense 10 drops of reagent D onto the section: leave to act for 5 minutes.
- 7) Wash in distilled water.
- 8) Dehydrate rapidly by means of the ascending series of alcohols, stopping for 1 minute in the last absolute; xylene and balsam.

KIDNEY

Results



Result	
Collagen fibrils	blue
Nuclei	black
Erythrocytes, cytoplasm	pink - orange
Elastic fibers	pale pink - yellow or colorless
Protein deposits	bright red



AgNOR

PRODUCT AND APPLICATION	CODE
AgNOR	04-045801

Minimum number of tests that can be performed	12 preparations (up to 4 slides per preparation)
Completion time	30 minutes
Shelf life	1 year
Storage conditions	15-25 °C
Additional equipment	glass rod, jars for washing in distilled water

Application

Method for highlighting argentaffin proteins (100 kD) in the nucleolus organizer region (NOR) on paraffin-embedded sections and smears.

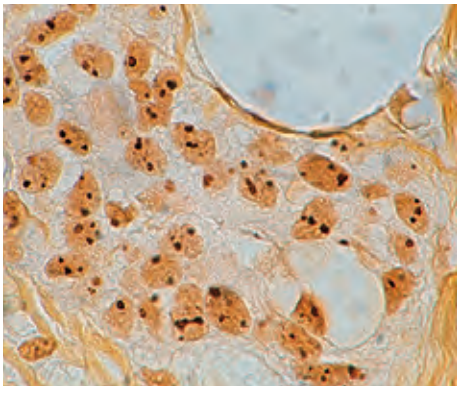
Method

- 1) Bring the section to the distilled water.
- 2) Preparation of the work solution: place the slide container in the polystyrene stand. Pour the entire contents of bottle A and the entire contents of a bottle B into the container. Stir briefly with a glass rod previously washed in distilled water.
- 3) Place the section in the solution and incubate in the dark for 30 minutes at room temperature.
- 4) Wash thoroughly in three changes of distilled water.
- 5) Dispense 10 drops of reagent C onto the section: leave to act for 1 minute.
- 6) Wash in distilled water.
- 7) Dehydrate by means of the ascending series of alcohols, xylene and balsam.

Results

BREAST

Result	
AgNOR, argentaffin granules	black



WARNINGS

- For washing, it is imperative to use top-quality distilled water.
- Do not use Poly-L-Lysine coated slides.
- Do not use metal objects (racks, forceps).
- After mounting, keep the slides in the dark.

Bio-Optica

Alcian Blue pH 2.5

PRODUCT AND APPLICATION	CODE
Alcian Blue pH 2.5	04-160802

Minimum number of tests that can be performed	100
Completion time	50 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Not required

Application

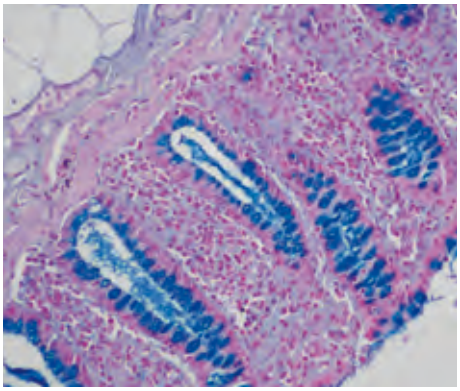
Method indicated for highlighting acid mucopolysaccharides on tissue sections.

Method

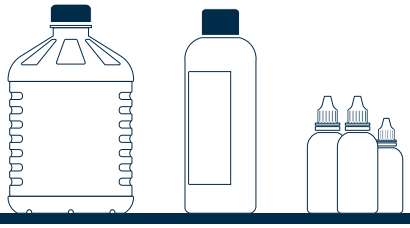
- 1) Bring the section to the distilled water.
- 2) Dispense 10 drops of reagent A onto the section: leave to act for 30 minutes.
- 3) Without washing, drain the slide and dispense 10 drops of reagent B onto the section: leave to act for 10 minutes.
- 4) Wash in distilled water.
- 5) Dispense 10 drops of reagent C onto the slide: leave to act for 5 minutes.
- 6) Wash in distilled water.
- 7) Dehydrate by means of the ascending series of alcohols; xylene and balsam.

INTESTINE

Results



Result	
Acid mucopolysaccharides	blue - turquoise
Nuclei	red



Alcian Blue pH 2.5 P.A.S.

PRODUCT AND APPLICATION	CODE
Alcian Blue pH 2,5 PAS	04-163802

Minimum number of tests that can be performed	100
Completion time	1 hour 25 minutes
Shelf life	1 year
Storage conditions	2-8°C
Additional equipment	Not required

Application

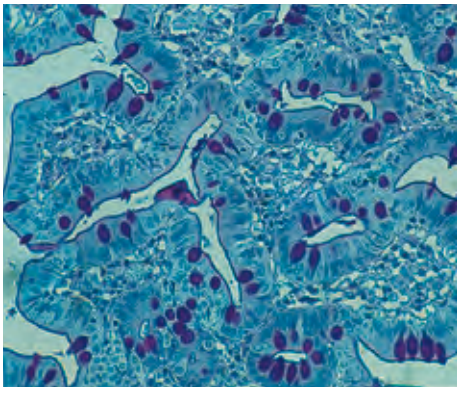
Combined method for differentiating acid mucins, neutral mucins and carbohydrates on tissue sections.

Method

- 1) Bring the section to the distilled water.
- 2) Dispense 10 drops of reagent A onto the section: leave to act for 30 minutes.
- 3) Without washing, drain the slide and dispense 15 drops of reagent B onto the section: leave to act for 10 minutes.
- 4) Wash for 5 minutes in tap water and for 2 minutes in distilled water.
- 5) Dispense 10 drops of reagent C onto the section: leave to act for 10 minutes.
- 6) Wash in distilled water.
- 7) Dispense 10 drops of reagent D onto the section: leave to act for 20 minutes.
- 8) Wash in distilled water.
- 9) Dispense 10 drops of reagent E onto the section: leave to act for 2 minutes.
- 10) Without washing, drain the slide and dispense 10 drops of reagent F onto the section: leave to act for 3 minutes.
- 11) Wash in distilled water.
- 12) Dispense 10 drops of reagent G onto the section: leave to act for 2 minutes.
- 13) Leave to develop in running tap water for 5 minutes.
- 14) Dehydrate in the ascending series of alcohols; xylene and balsam.

Result	
PAS-positive substances	magenta red
Acid mucopolysaccharides	blue - turquoise
Certain acid mucins and cartilage	from purple to dark blue

INTESTINE **Results**



Bio-Optica

Alcian Yellow - Toluidine blue

PRODUCT AND APPLICATION	CODE
Alcian Yellow - Toluidine blue for Helicobacter pylori	04-169812

Minimum number of tests that can be performed	100
Completion time	25 minutes
Shelf life	2 years
Storage conditions	15-25°C
Additional equipment	Not required

Application

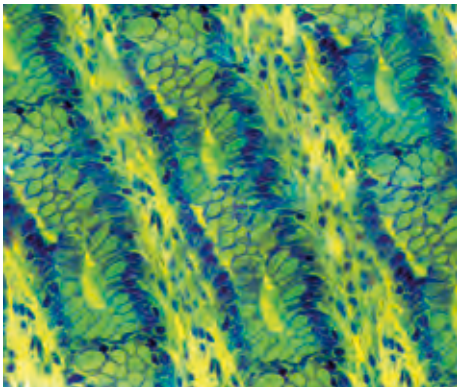
Combined method for highlighting Helicobacter pylori and epithelial mucins on sections of gastric tissue; recommended section thickness 5 microns.

Method

- 1) Bring the section to the distilled water.
- 2) Dispense 10 drops of reagent A onto the section: leave to act for 10 minutes.
- 3) Wash thoroughly in distilled water.
- 4) Dispense 10 drops of reagent B onto the section: leave to act for 5 minutes.
- 5) Wash in tap water for 2 minutes.
- 6) Dispense 10 drops of reagent C onto the slide: leave to act for 5 minutes.
- 7) Wash thoroughly in distilled water.
- 8) Dispense 8 drops of reagent D and 2 drops of reagent E onto the section: leave to act for 3 minutes.
- 9) Wash thoroughly in distilled water.
- 10) Dry in air.
- 11) Dehydrate in alcohol; xylene and balsam.

Results

INTESTINE



Result	
Helicobacter pylori	blue
Mucins	yellow
Background	blue

Amylase - Enzymatic digestion

PRODUCT AND APPLICATION	CODE
Amylase - enzymatic digestion	04-140808

Minimum number of tests that can be performed	100
Completion time	10 minutes
Shelf life	1 year
Storage conditions	2-8°C
Additional equipment	Vertical jar

Application

Removal of glycogen from
- Hepatic tissue, paraffin-embedded sections: digestion on a histological section with a solution of amylase is indicated when you want to remove the glycogen so as to observe only the neutral epithelial mucins. It is the method of choice in liver biopsy.
- Muscle tissue: the examination of adjacent cryostat sections, one of which has been treated with amylase, allows qualitative evaluation of the presence of glycogen.

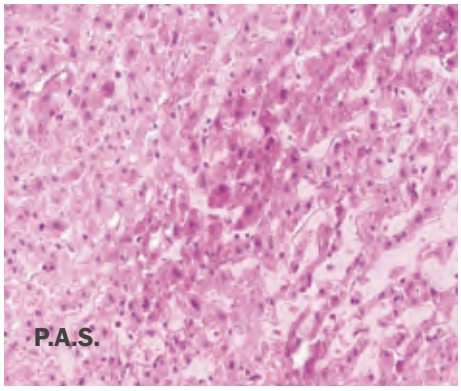
Method

- 1) Bring the section to the distilled water.
- 2) Bring the amylase solution to room temperature.
- 3) Cover the section with the amylase solution: leave to act for 10 minutes at room temperature.
- 4) Wash the slide several times in distilled water.
- 5) Proceed with the PAS reaction in the normal manner.

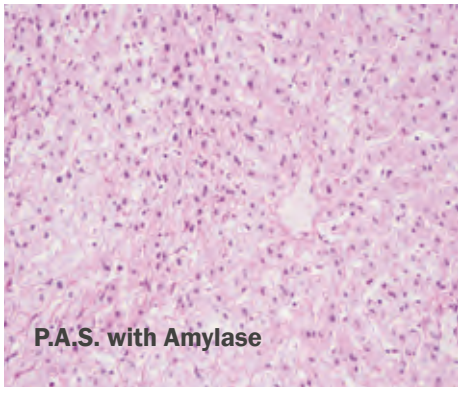
Result
The removal of glycogen can be detected, after PAS reaction, by comparing the sample section with an adjacent section of the same preparation that has not been treated with amylase.

Results

LIVER



LIVER



Bio-Optica

Azan Trichrome

PRODUCT AND APPLICATION	CODE
Azan Trichrome	04-001802

Minimum number of tests that can be performed	100
Completion time	1 hour 40 minutes
Shelf life	2 years
Storage conditions	15-25°C
Additional equipment	Vertical histology jar, oven

Application

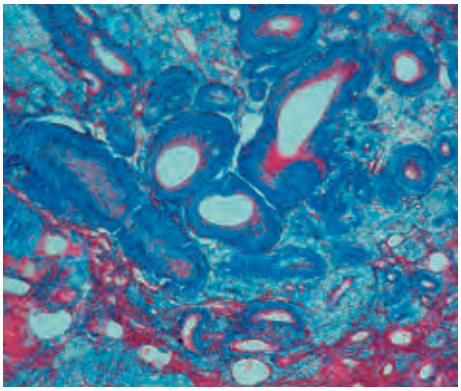
The method of choice for connective tissue, particularly indicated for muscle and glial fiber, collagen, reticulum, glomerular stroma of the kidney, erythrocytes and nuclear chromatin on histological sections.

Method

- 1) Bring the section to the distilled water.
- 2) Incubate the section in reagent A in an oven at 56°C for 30 minutes, then remove from the oven and wait for 5 minutes. Retrieve the stain and transfer it to bottle A without filtering it.
- 3) Wash in distilled water.
- 4) Dispense 10 drops of reagent B onto the section: leave to act for 1 minute.
- 5) Drain on filter paper, then dispense 10 drops of reagent C onto the section: leave to act for 1 minute.
- 6) Drain on filter paper, then dispense 10 drops of reagent D onto the section: leave to act for 30 minutes.
- 7) Drain on filter paper and without washing, dispense 10 drops of reagent E onto the section: leave to act for 30 minutes.
- 8) Wash quickly in 95° ethanol. Dehydrate in the ascending series of alcohols; xylene and balsam.

Results

OVARY



Result	
Collagen, reticulum, basophilic cytoplasmic granules of the pituitary gland, juxtaglomerular granules and glomerular stroma of the kidney	blue
Neurofibrils (glia)	reddish
Muscle	orange
Nuclei, erythrocytes and acidophilic granules of the pituitary gland	red
Cytoplasmic granules of the delta cells of the pituitary gland	blue

Bielschowsky

PRODUCT AND APPLICATION	CODE
Bielschowsky for neurofibrils	04-040805

Minimum number of tests that can be performed	100
Completion time	45 minutes
Shelf life	1 year
Storage conditions	2-8°C
Additional equipment	oven, 50 ml Coplin jar, glass rod

Application

The method of choice for viewing neurofibrils, axons, dendrites and senile plaques. Usable on sections fixed in 10% formalin and embedded in paraffin, having a thickness of 8 – 10 µm.

Method

- 1) Bring the section to the distilled water.
- 2) Place the slide in a humid chamber, dispense 10 drops of reagent A onto the section; close the lid and incubate in the oven at 40°C for 15 minutes.
- 3) Remove the slide from the humid chamber and wash the section thoroughly in distilled water.
- 4) Return the slide to the humid chamber and dispense 10 drops of reagent B onto the section: close the lid and incubate in the oven at 50/55°C for 20 minutes. During this incubation period, prepare the reducing solution as follows: dispense 50 ml of distilled water into a Coplin jar and add 20 drops of reagent C, 8 drops of reagent D, 8 drops of reagent E and 8 drops of reagent F.
  Stir briefly with a glass rod.
- 5) Without washing, drain the slide and place it in the reducing solution: leave to act for 1-2 minutes.
- 6) Wash twice in distilled water.
- 7) Dispense 10 drops of reagent G onto the section: leave to act for 3 minutes.
- 8) Wash twice in distilled water.
- 9) Dehydrate by means of the ascending series of alcohols; xylene and balsam.

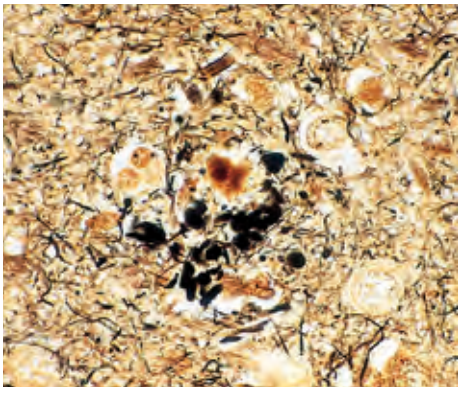
Result	
Neurofibrils and senile plaques	black
Background	from yellow to brown

WARNINGS

The success of the reaction depends on rigorous adherence to the following rules:

- Always use good-quality, totally chlorine-free distilled or deionized water.
- Use only rigorously clean glassware or plastic ware.
- Never bring metal objects (forceps etc.) into contact with the solutions.

CEREBRAL CORTEX **Results**



Bio-Optica

Brown - Brenn

PRODUCT AND APPLICATION	CODE
Brown - Brenn for bacteria	04-100807

Minimum number of tests that can be performed	100
Completion time	8 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Not required

Application

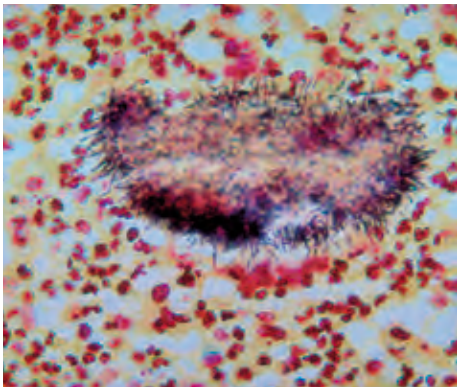
Method for differentiating Gram-positive and Gram-negative bacteria on histological sections and smears.

Method

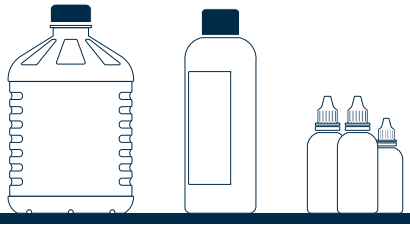
- 1) Bring the section to the distilled water.
- 2) Dispense 8 drops of reagent A and 2 drops of reagent B onto the section: leave to act for 1 minute.
- 3) Wash in distilled water.
- 4) Dispense 10 drops of reagent C onto the section: leave to act for 3 minutes
- 5) Wash in distilled water and dry the slide with filter paper.
- 6) Dispense 10 drops of reagent D onto the section: leave to act for 1 minute.
- 7) Drain without washing and dispense 10 drops of reagent E onto the section: leave to act for 1 minute
- 8) Wash in distilled water and dry the slide with filter paper.
- 9) Dispense 10 drops of reagent F onto the section: leave to act for 1 minute.
- 10) Drain without washing and dispense 10 drops of reagent G onto the section: leave to act for 30 seconds.
- 11) Xylene and balsam.

Results

OVARY



Result	
Gram-positive bacteria	blue
Gram-negative bacteria	red
Actinomycetes (Nocardia)	blue
Nuclei	red
Other tissue elements	yellow



Diastase - Enzymatic digestion

PRODUCT AND APPLICATION	CODE
Diastase for enzymatic digestion	04-140805

Minimum number of tests that can be performed	40
Completion time	30 minutes
Shelf life	1 year
Storage conditions	2-8°C
Additional equipment	vertical jar

Application

Digestion on a histological section with a solution of diastase is always indicated when you want to remove the glycogen so as to observe only the neutral epithelial mucins. It is the method of choice in liver biopsy.

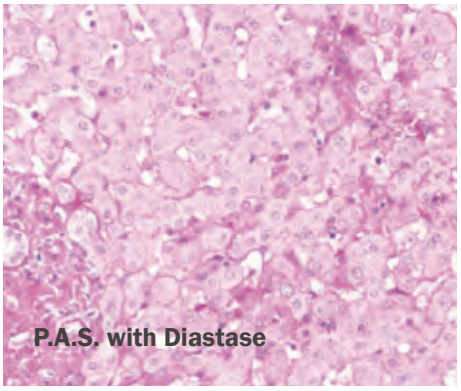
Method

- 1) Bring the section to the distilled water.
- 2) Bring the diastase solution to room temperature.
- 3) Incubate the slide at room temperature for 30 minutes.
- 4) Wash the slide several times in distilled water.
- 5) Proceed with the PAS reaction in the normal manner.

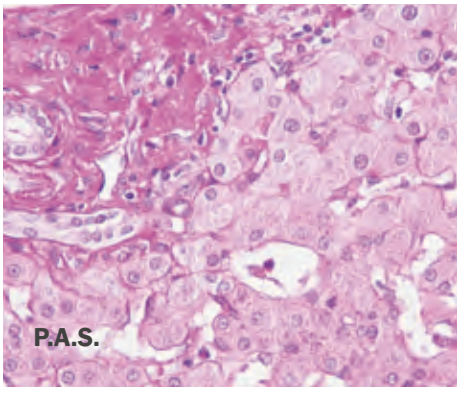
Result
The removal of glycogen can be detected, after PAS reaction, by comparing the sample section with an adjacent section of the same preparation that has not been treated with diastase.

Results

LIVER



LIVER



Bio-Optica

Colloidal iron

PRODUCT AND APPLICATION	CODE
Colloidal iron, method for acid mucins	04-180809

Minimum number of tests that can be performed	100
Completion time	1 hour 35 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	50 ml vertical histology jar, graduated cylinder and glass rod

Application

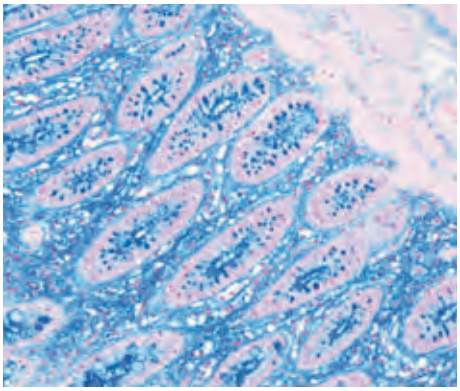
Indicated method for viewing acid mucins.
Specificity: the reaction shows acid mucins (sialomucins and sulfomucins) whose acid groups, at the reaction pH, take anionic form and are therefore capable of forming a stable complex with positive trivalent iron.

Method

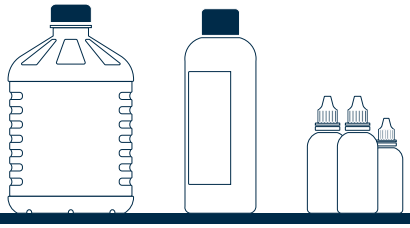
- 1) Bring the section to the distilled water.
- 2) Dispense 10 drops of reagent A onto the section: leave to act for 2 minutes.
- 3) Prepare the humid chamber as follows: soak the disk of filter paper with approximately 1 ml of distilled water, insert the slide and dispense 5 drops of reagent B and 5 drops of reagent C onto the section, then close the lid and incubate for 1 hour.
- 4) Without washing, drain the slide and dispense 10 drops of reagent D onto it: leave to act for 1 minute. Drain and repeat.
- 5) Without washing, drain the slide and dispense 10 drops of reagent E onto it: leave to act for 1 minute. Drain and repeat.
- 6) Drain the slide.
- 7) Prepare the potassium ferrocyanide solution as follows: pour the entire contents of a bottle F into a 50 ml Coplin jar. Add, in order, 30 ml of distilled water and 4 ml of reagent G. Stir briefly. Immerse the section for 10 minutes.
- 8) Wash thoroughly in distilled water.
- 9) Dispense 10 drops of reagent H onto the section: leave to act for 5 minutes.
- 10) Wash in distilled water.
- 11) Dehydrate in 95° and absolute ethanol; xylene and balsam.

INTESTINE

Results



Result	
Acid mucins	blue
Cellular nuclei	red



Fouchet-Van Gieson

PRODUCT AND APPLICATION		CODE
Fouchet-Van Gieson for bilirubin		04-121872
Minimum number of tests that can be performed	100	
Completion time	35 minutes	
Shelf life	2 years	
Storage conditions	15-25 °C	
Additional equipment	Not required	

Application

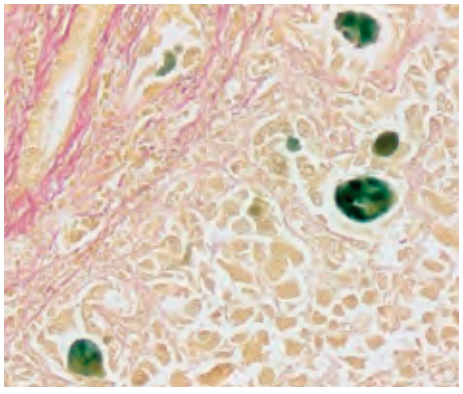
For highlighting bilirubin pigment on tissue sections.

Method

- 1) Bring the sections to the distilled water.
- 2) Dispense 5 drops of reagent A onto the section and add 5 drops of reagent B, leave to act for 5 minutes.
- 3) Wash in distilled water.
- 4) Dispense 10 drops of reagent C onto the section: leave to act for 7 minutes.
- 5) Without washing, drain the slide and dry it first in filter paper, then in the air for 5 minutes.
- 6) Absolute alcohol for 15 seconds, xylene and balsam.

Result	
Bilirubin	green
Connective	red
Collagen	yellow

BILIRUBIN DEPOSITS **Results**



Bio-Optica

Paraldehyde Fuchsin

PRODUCT AND APPLICATION	CODE
Paraldehyde Fuchsin - Gomori	04-045872

Minimum number of tests that can be performed	100
Completion time	1 hour 15 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Not required

Application

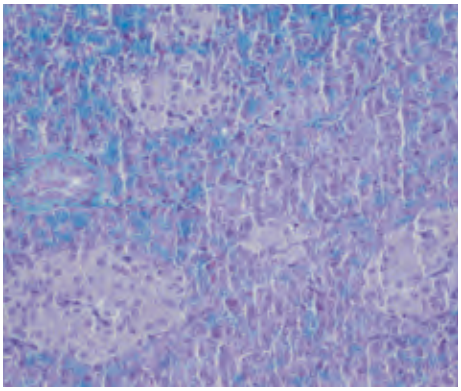
For viewing elastic fibers and secretory granules in alpha and beta cells of the islets of Langerhans of the endocrine pancreas.

Method

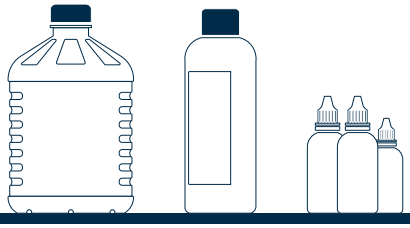
- 1) Bring the sections to the distilled water.
- 2) Dispense 5 drops of reagent A onto the section and add 5 drops of reagent B, leave to act for 10 minutes.
- 3) Wash in distilled water.
- 4) Dispense 10 drops of reagent C onto the section, leave to act for 5 minutes.
- 5) Wash in distilled water.
- 6) Dispense 10 drops of reagent D onto the section, leave to act for 5 minutes.
- 7) Without washing, drain the slide and place it in the humid chamber, then dispense 10 drops of reagent E onto the section and leave to act for 20 minutes.
- 8) Drain the slide and dispense 10 drops of reagent F onto the section, then leave to act for 10 minutes.
- 9) Wash the slide in distilled water.
- 10) Dispense 10 drops of reagent G onto the section, leave to act for 10 minutes.
- 11) Wash in distilled water.
- 12) Dispense 10 drops of reagent H onto the section, leave to act for 30 seconds.
- 13) Wash in distilled water, dehydrate in 95 and absolute alcohol, xylene and balsam.

Results

PANCREAS



Results	
Pancreatic beta-cell granules	dark violet
Cellular nuclei	dark violet
Connective tissue	red
Tessuto connettivo	green



Giemsa

PRODUCT AND APPLICATION		CODE
● **Giemsa for Helicobacter pylori**		04-090803
Minimum number of tests that can be performed	75	
Completion time	1 hour	
Shelf life	2 years	
Storage conditions	15-25 °C	
Additional equipment	Graduated cylinder	

Application

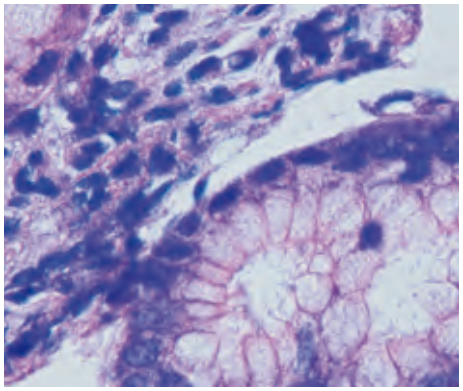
Method for viewing Helicobacter Pylori on sections from gastric biopsy.
The qualitative and quantitative composition of the stain and the accurate differentiation make it possible to identify bacteria selectively on a particularly clean background.

Method

- 1) De-wax the sections and bring them to the water.
- 2) Prepare the buffer solution: take 5 ml of solution from bottle B and dilute in a ratio of 1:10.
  Use the solution thus obtained to prepare the working Giemsa solution.
- 3) Prepare the working Giemsa solution: take 10 ml of reagent A and top up to 40 ml with the previously prepared buffer solution.
- 4) Place the solution in the jar and immerse the sections in it for 30 minutes.
- 5) Drain and, without washing, place the section in reagent C for 15 seconds.
- 6) Repeat step 5 with reagents D and E.
- 7) Diaphanize in xylene and mount with balsam.

Result	
Helicobacter pylori	blue, in the characteristic gullwing shape
Nuclei	blue
Cytoplasm	pink

GASTRIC MUCOSA **Results**



Bio-Optica

Gordon-Sweet

PRODUCT AND APPLICATION	CODE
Gordon-Sweet - for reticulum	04-040802

Minimum number of tests that can be performed	100
Completion time	40 minutes
Shelf life	1 year
Storage conditions	2-8°C
Additional equipment	Not required

Application

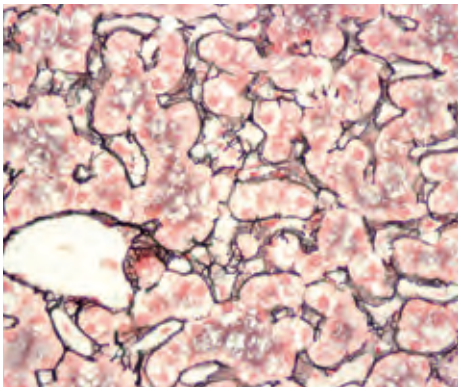
The method of choice for viewing argyrophilic reticular fibers of connective tissue.

Method

- 1) Bring the section to the distilled water.
- 2) Dispense 5 drops of reagent A and 5 drops of reagent B onto the section: leave to act for 5 minutes.
- 3) Wash in distilled water.
- 4) Dispense 10 drops of reagent C onto the section: leave to act for 1 minutes.
- 5) Wash twice in distilled water.
- 6) Dispense 10 drops of reagent D onto the section: leave to act for 3 minutes.
- 7) Wash twice in distilled water.
- 8) Dispense 10 drops of reagent E onto the section: leave to act for 3 minutes.
- 9) Wash in distilled water.
- 10) Dispense 10 drops of reagent F onto the section: leave to act for 5 minutes.
- 11) Wash twice in distilled water.
- 12) Dispense 10 drops of reagent G onto the section: leave to act for 2 minutes.
- 13) Wash in distilled water.
- 14) Dispense 10 drops of reagent H onto the section: leave to act for 2 minutes.
- 15) Wash in distilled water.
- 16) Dispense 10 drops of reagent I onto the section: leave to act for 5 minutes.
- 17) Dehydrate by means of the ascending series of alcohols; xylene and balsam.

Results

LIVER

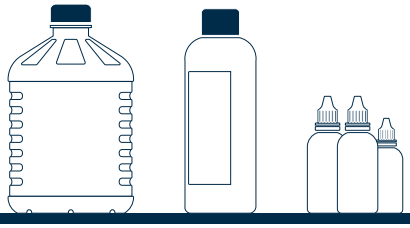


Result	
Reticular and nerve fibers	black
Nuclei	red, pink

WARNINGS

The success of the reaction depends on rigorous adherence to the following rules:

- Always use good-quality, totally chlorine-free distilled or deionized water.
- Use only rigorously clean glassware.
- Avoid depositing dust on the sections.
- Never bring metal objects (forceps etc.) into contact with the solutions.



Gram

PRODUCT AND APPLICATION	CODE
Gram for bacteria	04-100802

Minimum number of tests that can be performed	100
Completion time	40 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	3 vertical glass histology jars, funnel, filter, oven

Application

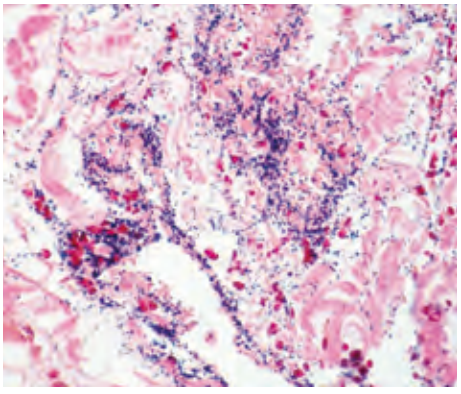
Method for differentiating Gram-positive and Gram-negative bacteria on histological sections, smears and tissue apposition.

Method

- 1) Bring the section to the distilled water.
- 2) Pour the contents of bottle A into a vertical histology jar, place the slide in it and incubate at 56-58 °C for 15 minutes; retrieve the solution and transfer it to bottle A, filtering it through filter paper.
- 3) Wash in distilled water.
- 4) Dispense 10 drops of reagent B onto the section: leave to act for 3 minutes.
- 5) Drain the slide and, without washing it, dispense 10 drops of solution C onto it: leave to act for 3 minutes.
- 6) Wash in distilled water and dry the slide first in filter paper, then in the air for 10 minutes.
- 7) Pour the contents of bottle D into a vertical histology jar: stir the slide in it for 1 minute; retrieve the solution and transfer it to bottle D, filtering it through filter paper.
- 8) Repeat step 7 with reagent E.
- 9) Xylene and balsam.

Result	
Gram-positive bacteria	blue
Gram-negative bacteria	red
Nuclei	red

NECROTIZING FASCIITIS **Results**



Bio-Optica

Gram for microbiology

PRODUCT AND APPLICATION	CODE
Gram for microbiology	04-100803
with basic fuchsin as counterstain solution	04-100804

Completion time	6 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	graduated cylinder, glass rod, oven

Application

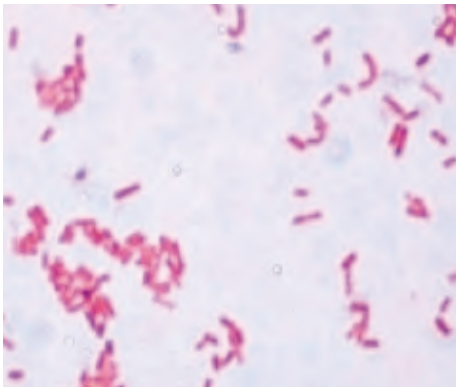
Method for differentiation of gram-positive and gram-negative bacteria in fixed smears. This method is often used to assess suitability of specimen for culture.

Method

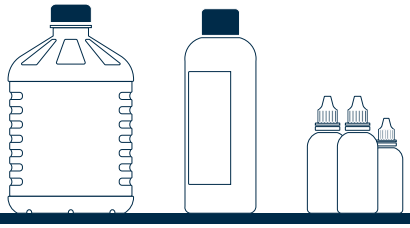
- 1) Fix air-dried smears using one of the following techniques:
  a - Heat fix by passing the slide through a low flame 2-3 times. Cool the slide at room temperature before staining
  b - Methanol fix, immerse the slide in absolute methanol for 1 - 2 minutes and rinse with distilled water before staining
- 2) Cover specimens with reagent A (Crystal-violet Hucker solution), leave to act 1 minute.
- 3) Drain the slide and flood briefly with reagent B (Lugol solution).
- 4) Cover completely with reagent B (Lugol solution) and leave to act 1 minute.
- 5) Wash with distilled water.
- 6) Cover completely with reagent C (Decolorizing solution): leave to act 1 minute.
- 7) Wash with distilled water.
- 8) Cover completely with reagent D (Safranin solution): Leave to act 1 minute.
- 9) Wash carefully with distilled water.
- 10) Air dry.

Results

GRAM-NEGATIVE BACTERIA



Result	
Gram-positive bacteria	Blue-violet
Gram-negative bacteria	Pink-Red



Grocott

PRODUCT AND APPLICATION		CODE
Grocott for fungi		04-043823
Minimum number of tests that can be performed	120	
Completion time	1 hour 50 minutes	
Shelf life	1 year	
Storage conditions	2-8°C	
Additional equipment	graduated cylinder, glass rod, oven	

Application

Method used for viewing fungi on a tissue section.

Method

- 1) Bring the section to the distilled water.
- 2) Dispense 10 drops of reagent A onto the section, leave to act for 20 minutes. Wash in running water for a few seconds.
- 3) Dispense 10 drops of reagent B onto the section: leave to act for 1 minute. Wash in tap water for 5 minutes.
- 4) Wash in four changes of distilled water.
- 5) Pour 17 ml of distilled water into a slide container and add: 20 drops of reagent C, 10 drops of reagent D, 20 drops of reagent E. Stir briefly with a glass rod washed in distilled water.
- 6) Place the slide in the container and incubate for 1 hour in an oven at 60°C.
- 7) Remove the container from the oven and leave to cool for 10 minutes. Wash in 6 changes of distilled water.
- 8) Dispense 10 drops of reagent F onto the section; leave to act for 3 minutes. Rinse in distilled water.
- 9) Dispense 10 drops of reagent G onto the section; leave to act for 5 minutes. Wash in tap water.
- 10) Dispense 10 drops of reagent H onto the section; leave to act for 30 seconds.
- 11) Dehydrate by means of the ascending series of alcohols; xylene and balsam.

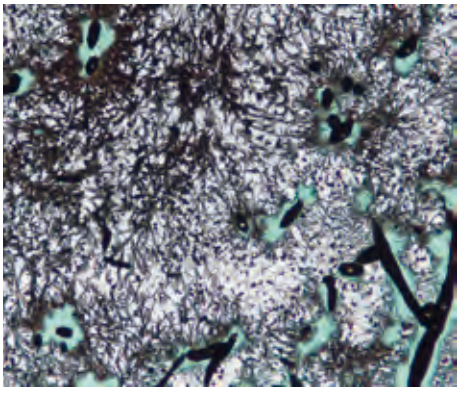
Result	
Fungi	clearly outlined in black
Mucins	dark gray
Background	green

WARNINGS

The success of the reaction depends on rigorous adherence to the following rules:

- Avoid contaminating the section and microscope slide with non-pathogenic fungi (handle only with gloves, do not leave the preparation exposed to air).
- Always use recently distilled water.
- Use only rigorously clean glassware.
- Avoid depositing dust on the sections.
- Never bring metal objects (forceps etc.) into contact with the solutions.

LUNG **Results**



Bio-Optica

Grocott for microwave oven

PRODUCT AND APPLICATION	CODE
Grocott MW for fungi	04-043823W

Minimum number of tests that can be performed	120
Completion time	50 minutes
Shelf life	1 year
Storage conditions	2-8°C
Additional equipment	graduated cylinder, glass rod, oven

Application

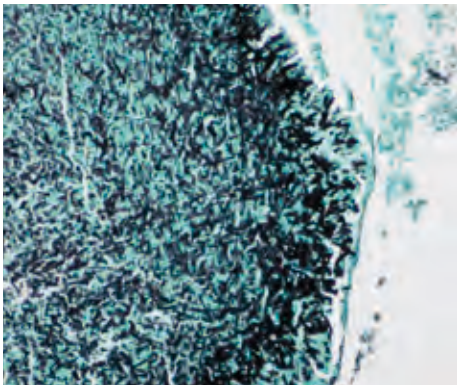
Method used for viewing fungi on a tissue section.

Method

- 1) Bring the section to the distilled water.
- 2) Dispense 10 drops of reagent A onto the section, leave to act for 20 minutes. Wash in running water for a few seconds.
- 3) Dispense 10 drops of reagent B onto the section: leave to act for 1 minute. Wash in tap water for 5 minutes.
- 4) Wash in four changes of distilled water.
- 5) Pour 40 ml of distilled water into a 50 ml Coplin jar and add: 30 drops of reagent C, 15 drops of reagent D, 20 drops of reagent E. Stir briefly with a glass rod washed in distilled water.
- 6) Put the slides in the jar and place in a microwave oven at 500W for 1 minute.
- 7) Remove the jar from the oven and leave to cool for 5 minutes. Wash in 6 changes of distilled water.
- 8) Dispense 10 drops of reagent F onto the section; leave to act for 3 minutes. Rinse in distilled water.
- 9) Dispense 10 drops of reagent G onto the section; leave to act for 5 minutes. Wash in tap water.
- 10) Dispense 10 drops of reagent H onto the section; leave to act for 30 seconds.
- 11) Dehydrate by means of the ascending series of alcohols; xylene and balsam.

Results

NASAL POLYP



Result	
Fungi	clearly outlined in black
Mucins	dark gray
Background	green

WARNINGS

The success of the reaction depends on rigorous adherence to the following rules:

- Avoid contaminating the section and microscope slide with non-pathogenic fungi (handle only with gloves, do not leave the preparation exposed to air).
- Always use recently distilled water.
- Use only rigorously clean glassware.
- Avoid depositing dust on the sections.
- Never bring metal objects (forceps etc.) into contact with the solutions.

Silver impregnation

PRODUCT AND APPLICATION	CODE
Silver impregnation staining for reticulum	04-040801

Minimum number of tests that can be performed	100
Completion time	35 minutes
Shelf life	1 year
Storage conditions	2-8°C
Additional equipment	Not required

Application

The method of choice for viewing argyrophilic reticular fibers of connective tissue.

Method

- 1) Bring the section to the distilled water.
- 2) Dispense 5 drops of reagent A and 5 drops of reagent B onto the section: leave to act for 5 minutes.
- 3) Wash in distilled water.
- 4) Dispense 10 drops of reagent C onto the section: leave to act for 3 minutes.
- 5) Wash twice in distilled water.
- 6) Dispense 10 drops of reagent D onto the section: leave to act for 3 minutes.
- 7) Wash twice in distilled water.
- 8) Dispense 10 drops of reagent E onto the section: leave to act for 3 minutes.
- 9) Wash in distilled water.
- 10) Dispense 10 drops of reagent F onto the section: leave to act for 5 minutes.
- 11) Wash twice in distilled water.
- 12) Dispense 10 drops of reagent G onto the section: leave to act for 5 minutes.
- 13) Wash in tap water for 5 minutes.
- 14) Dehydrate by means of the ascending series of alcohols; xylene and balsam.

Result	
Reticular and nerve fibers	black
Connective tissue	brown
Collagen	yellow

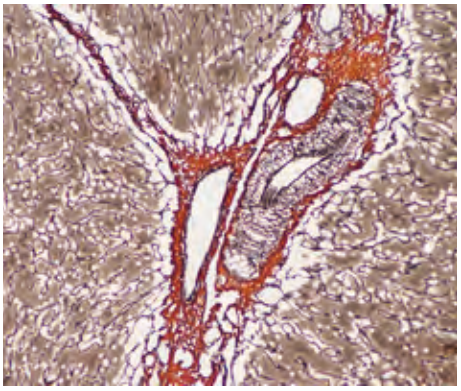
WARNINGS

The success of the reaction depends on rigorous adherence to the following rules:

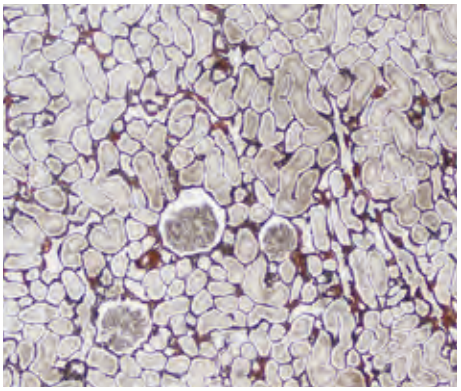
- Always use good-quality, totally chlorine-free distilled or deionized water.
- Use only rigorously clean glassware.
- Avoid depositing dust on the sections.
- Never bring metal objects (forceps etc.) into contact with the solutions.

Results

LIVER



KIDNEY



Bio-Optica

Luxol fast blue

PRODUCT AND APPLICATION	CODE
Luxol fast blue, Klüver-Barrera method	04-200812

Minimum number of tests that can be performed	100
Completion time	20 minutes + overnight
Shelf life	2 years
Storage conditions	15-25°C
Additional equipment	Not required

Application

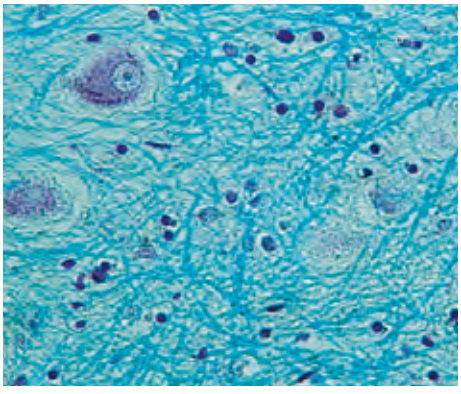
Method indicated for showing myelin and phospholipids on histological sections.

Method

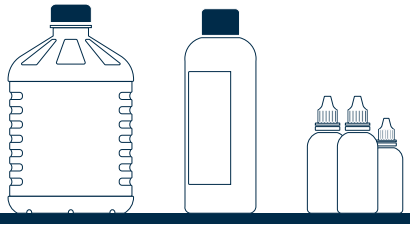
- 1) De-wax the section and bring it to the 95° ethanol.
- 2) Prepare the humid chamber by wetting the filter in the Petri dish with distilled water, place the slide in the rack and then dispense 10 drops of reagent A onto the section; close the lid of the dish immediately and incubate in an oven at 56°C overnight.
- 3) Remove the slide from the humid chamber and wash in 95° ethanol (the crystallized residues of reagent A must also dissolve).
- 4) Wash in distilled water.
- 5) Dispense 10 drops of reagent B onto the section: leave to act for 30 seconds.
- 6) Differentiate in 70° ethanol until the myelinated fibers appear in blue against an almost colorless background (if differentiation proves difficult, repeat step 5 for 30 seconds and put the preparation in 70° ethanol again).
- 7) Wash thoroughly in distilled water (at least 2 changes).
- 8) Prepare the humid chamber; dispense 10 drops of reagent C and 5 drops of reagent D onto the preparation, then incubate at 56°C for 20 minutes.
- 9) Differentiate the preparation in 95° ethanol until the Nissl substance turns pale pink.
- 10) Dehydrate in absolute ethanol; xylene and balsam.

CEREBELLUM

Results



Result	
Myelin	turquoise blue
Neurons and glial nuclei	from pink to violet
Nissl substance	pale pink



Mallory's Trichrome

PRODUCT AND APPLICATION		CODE
● **Mallory's Trichrome**		04-020802
Minimum number of tests that can be performed	100	
Completion time	20 minutes	
Shelf life	2 years	
Storage conditions	15-25 °C	
Additional equipment	Not required	

Application

The standard method for viewing connective tissue on histological sections; particularly indicated for highlighting collagen, reticulum, cartilage, bone and amyloid.

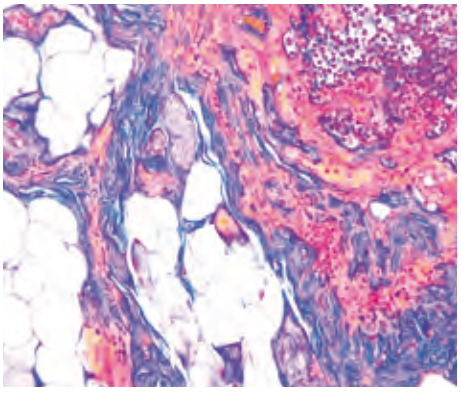
Method

- 1) Bring the section to the distilled water.
- 2) Dispense 10 drops of reagent A onto the section: leave to act for 10 minutes.
- 3) Wash in distilled water.
- 4) Dispense 10 drops of reagent B onto the section: leave to act for 2 minutes.
- 5) Wash quickly in tap water (2-3 seconds) and dispense 10 drops of reagent C onto the section: leave to act for 5 minutes.
- 6) Without washing, drain the slide and dispense 10 drops of solution D onto the section: leave to act for 1 minute.
- 7) Wash in distilled water and dehydrate rapidly by means of the ascending series of alcohols, stopping for 1 minute in the last absolute, xylene and balsam.

Results

COLON

Result	
Nuclei, neurofibrils, myoglia, cartilage and bone tissue	red
Collagen fibrils	blue
Myelin	golden yellow
Elastic fibers	pale pink – yellow or colorless
Erythrocytes	yellow



Bio-Optica

Masson Fontana

PRODUCT AND APPLICATION	CODE
Masson Fontana for melanin	04-041822

Minimum number of tests that can be performed	100
Completion time	45 minutes + overnight
Shelf life	1 year
Storage conditions	2-8°C
Additional equipment	Not required

Application

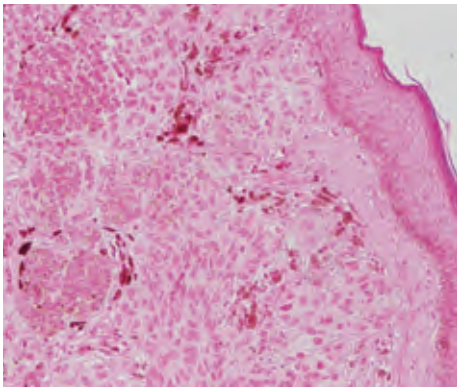
The method of choice for viewing melanin pigment on sections of histological tissue.

Method

- 1) Bring two slides of the same preparation to distilled water.
- 2) Use one of the two slides as a control. Perform steps 3-4 on the control section only.
- 3) Dispense 10 drops of reagent B and 10 drops of reagent C onto the control slide: leave to act for 20 minutes and then wash in distilled water.
- 4) Dispense 10 drops of reagent D onto the control slide: leave to act for 5 minutes and then wash in distilled water.
- 5) Prepare the humid chamber and place the two slides (sample and control) in it, then dispense 10 drops of reagent A onto each section, close the lid of the humid chamber and leave overnight.
- 6) Wash the incubated sections in distilled water and dispense 10 drops of reagent E onto them: leave to act for 5 minutes.
- 7) Wash in distilled water.
- 8) Dispense 10 drops of reagent F onto the control slide and the sample slide: leave to act for 10 minutes.
- 9) Wash in distilled water.
- 10) Dehydrate by means of the ascending series of alcohols, xylene and balsam.

SKIN

Results



Result	
Melanin pigment	brick red - black in the section under examination; absent in the control section (the presence of black precipitate on the control section indicates a false positive)
Nuclei	pink

Masson Trichrome

PRODUCT AND APPLICATION	CODE
Masson Trichrome with aniline blue	04-010802

Minimum number of tests that can be performed	100
Completion time	35 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Not required

Application

The method of choice for connective tissue, particularly indicated for gametes, nuclei, neurofibrils, glia, collagen, keratin, intracellular fibrils and negative images of the Golgi apparatus.

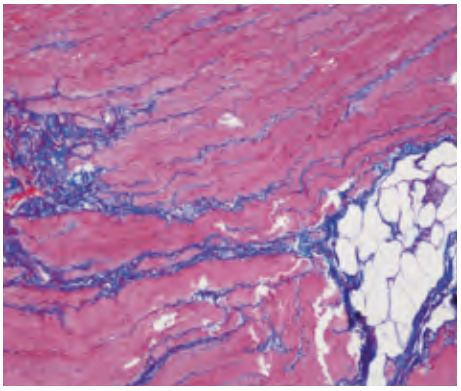
Method

- 1) Bring the section to the distilled water.
- 2) Dispense 6 drops of reagent A onto the section and add 6 drops of reagent B: leave to act for 10 minutes.
- 3) Without washing, drain the slide and dispense 10 drops of solution C onto the section: leave to act for 4 minutes.
- 4) Wash quickly (3-4 seconds) in distilled water, leaving the section yellow in color, and dispense 10 drops of solution D onto the slide: leave to act for 4 minutes.
- 5) Wash in distilled water and dispense 10 drops of solution E onto the section: leave to act for 10 minutes.
- 6) Without washing, drain the slide and dispense 10 drops of solution F onto it: leave to act for 5 minutes.
- 7) Wash in distilled water and dehydrate rapidly by means of the ascending series of alcohols, pausing for 1 minute in the last absolute: xylene and balsam.

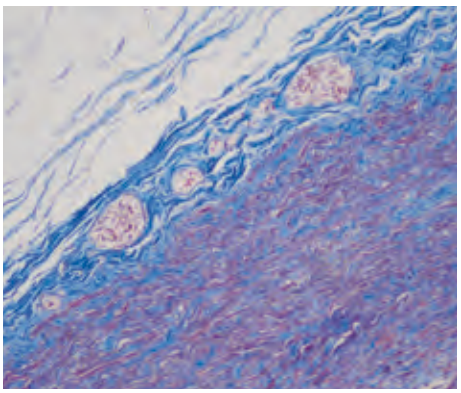
Result	
Nuclei and gametes	black
Cytoplasm, keratin, muscle fibers, acidophilic granules	red
Collagen, mucus, basophilic granules of the pituitary gland	blue
Delta cell granules of the pituitary gland	blue
Erythrocytes	yellow

Results

STOMACH



ARTERY



Bio - Optica

Masson - Goldner Trichrome

PRODUCT AND APPLICATION	CODE
Masson-Goldner Trichrome with light green	04-011802

Minimum number of tests that can be performed	100
Completion time	35 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Not required

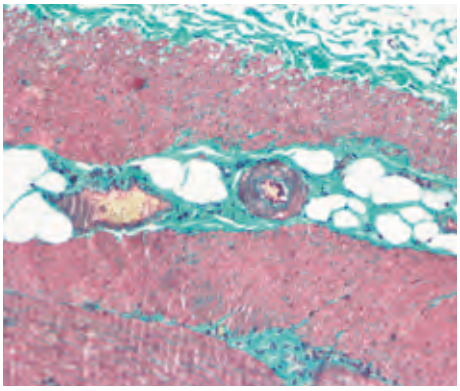
Application

The method of choice for connective tissue, indicated for highlighting gametes, nuclei, neurofibrils, glia, collagen, keratin, intracellular fibrils and negative images of the Golgi apparatus.
Particularly indicated for black and white micro-photography.

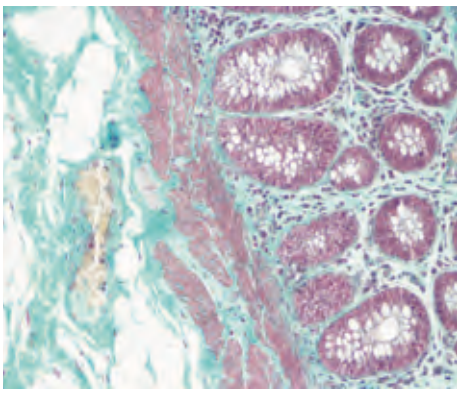
Method

- 1) Bring the section to the distilled water.
- 2) Dispense 6 drops of reagent A onto the section and add 6 drops of reagent B : leave to act for 10 minutes.
- 3) Without washing, drain the slide and dispense 10 drops of solution C onto the section: leave to act for 4 minutes.
- 4) Wash quickly (3-4 seconds) in distilled water and dispense 10 drops of solution D onto the slide: leave to act for 4 minutes.
- 5) Wash in distilled water and dispense 10 drops of solution E onto the section: leave to act for 10 minutes.
- 6) Without washing, drain the slide and dispense 10 drops of solution F onto it: leave to act for 5 minutes.
- 7) Wash in distilled water and dehydrate rapidly by means of the ascending series of alcohols, leaving for 1 minute in the last absolute: xylene and balsam.

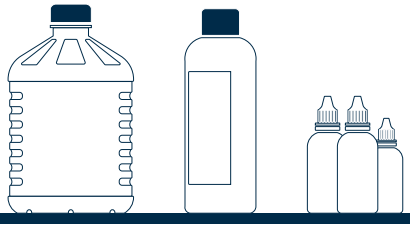
COLON **Results**



COLON



Result	
Nuclei and gametes	black
Cytoplasm, keratin, muscle fibers, acidophilic granules	red
Collagen, mucus, basophilic granules of the pituitary gland	green
Delta cell granules of the pituitary gland	green
Erythrocytes	yellow



May Grünwald Giemsa

PRODUCT AND APPLICATION	CODE
May Grünwald Giemsa for sections	04-081802

Minimum number of tests that can be performed	100
Completion time	35 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Graduated cylinder

Application

The method of choice for differentiating cell types and highlighting parasites on tissue sections; particularly indicated for lymphohematopoietic tissue. This stain is often used for identifying endothelial reticulum.

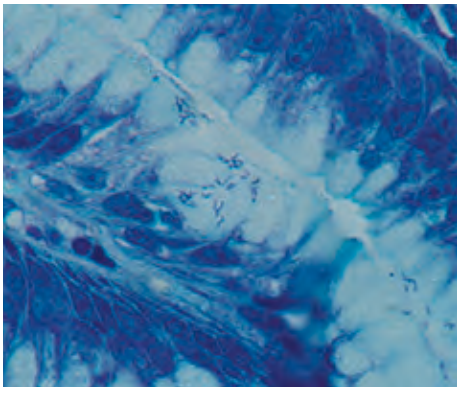
Method

- 1) De-wax the section and bring it to the 70° ethanol.
- 2) Prepare the buffer solution: Pour 20 ml of distilled water into the attached container and add 10 drops of concentrated solution B. The diluted solution thus obtained will be designated “buffer solution B”.
- 3) Dispense 10 drops of buffer solution B onto the section: leave to act for 2 minutes.
- 4) Drain the slide and dispense 10 drops of reagent A and 5 drops of buffer solution B onto it: leave to act for 5 minutes.
- 5) Pipette 10 ml of buffer solution B and wash the slide thoroughly with it.
- 6) Dispense 10 drops of reagent C and 10 drops of buffer solution B into the dish, stir, place on the slide and leave to act for 12 minutes.
- 7) Differentiate in: 95° ethanol for 10 seconds, absolute ethanol for 30 seconds; absolute ethanol for 30 seconds.
- 8) Xylene and balsam.

Results

STOMACH

Result	
Nuclei	blue
Basophilic cytoplasm	from sky blue to dark blue
Acidophilic cytoplast	pink
Bacteria	blue



Bio-Optica

Mucicarmine

PRODUCT AND APPLICATION	CODE
Mayer's mucicarmine	04-190812

Minimum number of tests that can be performed	100
Completion time	50 minutes
Shelf life	1 year
Storage conditions	15-25 °C
Additional equipment	Graduated pipette

Application

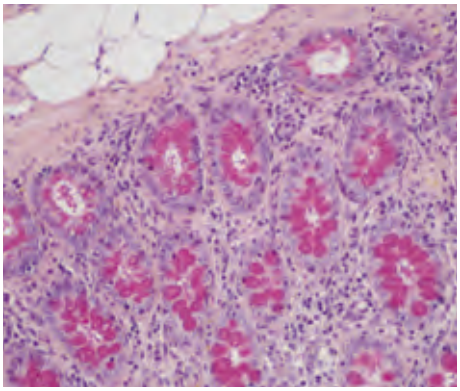
Method indicated for highlighting acid mucopolysaccharides of epithelial nature (mucins) on histological sections.
The use of Mucicarmine is of relative specificity, in fact mucins deriving from fibroblasts are generally weakly highlighted.

Method

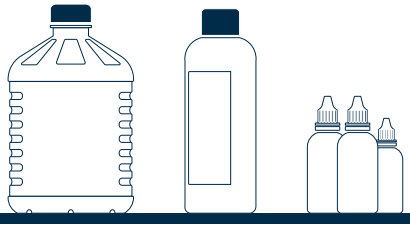
- 1) Bring the section to the distilled water.
- 2) Dispense 10 drops of reagent A onto the section; leave to act for 5 minutes.
- 3) Wash in distilled water.
- 4) Leave to develop in running water for 5 minutes.
- 5) Pipette 0.5 ml of distilled water into the dish, add 10 drops of reagent B, stir and transfer the mixture thus obtained to the slide: leave to act for 30 minutes.
- 6) Wash in distilled water.
- 7) Dispense 10 drops of reagent C onto the section: leave to act for 1 minute.
- 8) Wash in distilled water.
- 9) Dehydrate rapidly by means of the ascending series of alcohols, stopping in the last absolute; xylene and balsam.

COLON

Results



Result	
Mucins	from dark pink to red
Nuclei	blue – violet
Other components	orange



Nitro blue tetrazolium

PRODUCT AND APPLICATION	CODE
Nitroblue tetrazolium	04-253031

Minimum number of tests that can be performed	15
Completion time	30 minutes
Shelf life	2 years
Storage conditions	2-8°C
Additional equipment	Oven

Application

Post mortem, infarcted areas of the myocardium undergo a series of changes that are visible in sequence. In the first 6-12 hours after the acute episode, the myocardial infarction is generally neither macroscopically nor microscopically detectable. The ischemic muscle can, however, be highlighted, showing the loss of its oxidative activity with nitroblue tetrazolium staining on fresh sample: the infarcted area remains unstained.

Method

- 1) To obtain 150 ml of ready-to-use solution: pour the entire contents of reagents A, B and C into a container of appropriate size and capacity. Stir briefly.
- 2) Immerse the sample of heart in the solution obtained and incubate at 37°C for 20-30 minutes.
- 3) Wash in tap water and observe the sample: the infarcted area appears pale, not stained.

Result
The infarcted area appears pale, not stained.

Bio-Optica

Oil red 0

PRODUCT AND APPLICATION	CODE
Oil red 0	04-220923

Minimum number of tests that can be performed	100
Completion time	25 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Glass histology jar with lid

Application

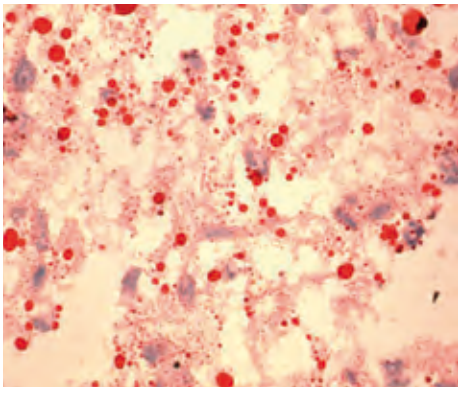
Method indicated for highlighting lipids on cryostat sections of tissue having a thickness of 5 µm.
Fixation: you are advised to use saline formalin or Baker fixative in order to make the phospholipids less soluble.

Method

- 1) Bring the section to the distilled water.
- 2) Place the reagent A in the jar and immerse the section in it for 20 minutes.
- 3) Wash briefly in tap water.
- 4) Drain and dispense 10 drops of reagent B onto the section: leave to act for 30 seconds.
- 5) Leave to develop in tap water for 3 minutes.
- 6) Drain and mount with aqueous mounting medium.

ADIPOSE TISSUE

Results



Result	
Fatty acids bright	red
Nuclei	blue

Orcein

PRODUCT AND APPLICATION		CODE
● **Orcein for elastic fibers**		04-055802
Minimum number of tests that can be performed	100	
Completion time	30 minutes	
Shelf life	2 years	
Storage conditions	15-25 °C	
Additional equipment	Not required	

Application

Identification of elastic fibers on tissue sections.

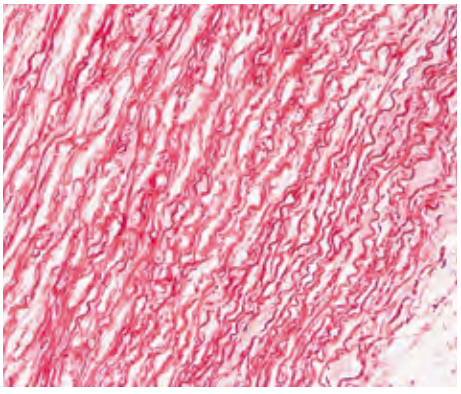
Method

- 1) Bring the section to the distilled water.
- 2) Dispense 5 drops of reagent A and 5 drops of reagent B onto the section. Leave to act for 4 minutes.
- 3) Wash in distilled water.
- 4) Dispense 10 drops of reagent C onto the section. Leave to act for 1 minute.
- 5) Wash in distilled water.
- 6) Prepare the humid chamber as follows: soak the disc of filter paper with 20 drops of reagent A, insert the slide in the humid chamber and dispense 10 drops of reagent E onto the section. Close the lid and incubate for 20 minutes.
- 7) Wash in distilled water.
- 8) Dispense 10 drops of reagent F onto the section. Leave to act for 2 minutes.
- 9) Wash in running water for 1 minute.
- 10) Dehydrate by means of the ascending series of alcohols, xylene and balsam.

Results

Result	
Elastic fibers	from dark brown to dark purple
Background	almost colorless

ELASTIC FIBERS



Bio-Optica

P.A.S. Periodic Acid Schiff

PRODUCT AND APPLICATION	CODE
P.A.S. Periodic Acid Schiff Hotchkiss - Mc Manus	04-130802

Minimum number of tests that can be performed	100
Completion time	50 minutes
Shelf life	1 year
Storage conditions	2-8°C
Additional equipment	Not required

Application

For highlighting normal or pathological tissue components, distinguished by adjacent glycol or amino hydroxyl groups on histological sections and on blood smears and cytology smears.

Method

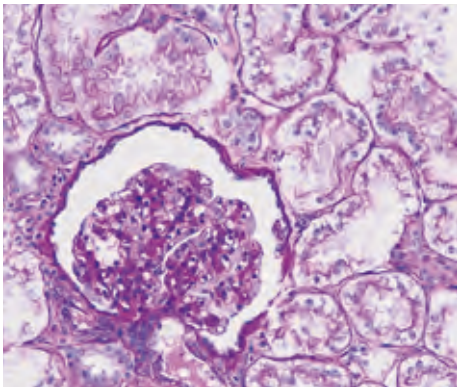
METHOD FOR HISTOLOGICAL SECTIONS

- 1) Bring the section to the distilled water.
- 2) Dispense 10 drops of reagent A onto the section: leave to act for 10 minutes.
- 3) Wash in distilled water.
- 4) Dispense 10 drops of reagent B onto the section: leave to act for 20 minutes.
- 5) Wash in distilled water.
- 6) Dispense 10 drops of solution C onto the section: leave to act for 2 minutes.
- 7) Drain the slide and, without washing, dispense 10 drops of reagent D onto the section: leave to act for 2 minutes.
- 8) Wash in distilled water.
- 9) Dispense 10 drops of reagent E onto the section: leave to act for 3 minutes.
- 10) Leave to develop in running water for 5 minutes.
- 11) Dehydrate in the ascending series of alcohols, xylene and balsam.

METHOD FOR BLOOD SMEARS AND CYTOLOGY SMEARS

- 1) Place the air-dried smears in distilled water.
- 2) Dispense 10 drops of reagent A onto the smear: leave to act for 10 minutes.
- 3) Wash in distilled water.
- 4) Dispense 10 drops of reagent B onto the smear: leave to act for 20 minutes.
- 5) Wash in distilled water.
- 6) Dispense 10 drops of solution C onto the smear: leave to act for 2 minutes.
- 7) Drain the slide and, without washing, dispense 10 drops of reagent D onto the smear: leave to act for 2 minutes.
- 8) Wash in distilled water.
- 9) Dispense 10 drops of reagent E onto the smear: leave to act for 3 minutes.
- 10) Leave to develop in running water for 5 minutes.
- 11) Dehydrate in the ascending series of alcohols, xylene and balsam.

KIDNEY **Results**



Result	
PAS-positive substances	magenta red
Nuclei	blue

P.A.S. - A

PRODUCT AND APPLICATION	CODE
P.A.S. - A Periodic Acid Schiff - Amylase	04-130803

Minimum number of tests that can be performed	100
Completion time	60 minutes
Shelf life	1 year
Storage conditions	2-8 °C
Additional equipment	Not required

Application

Digestion on a histological section with an amylase solution followed by PAS reaction is indicated when you want to remove the glycogen so as to observe only the neutral epithelial mucins.
PAS/amylase reaction is the method of choice for evaluating the presence of glycogen in liver tissue on sections fixed in formalin and embedded in paraffin, and in muscle tissue on cryostat sections.
In both cases, the examination of adjacent sections, one of which has been treated with amylase, allows qualitative evaluation of the presence of glycogen.

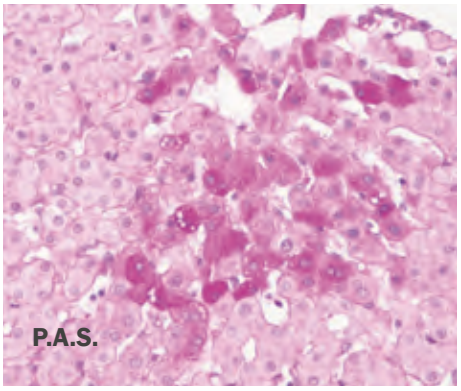
Method

- 1) Bring the section to the distilled water.
- 2) Bring reagent A to room temperature.
- 3) Dispense 10 drops of reagent A: leave to act for 10 minutes at room temperature.
- 4) Wash the slide several times in distilled water.
- 5) Dispense 10 drops of reagent B onto the section: leave to act for 10 minutes.
- 6) Wash in distilled water.
- 7) Dispense 10 drops of reagent C onto the section: leave to act for 20 minutes.
- 8) Wash in distilled water.
- 9) Dispense 10 drops of solution D onto the section: leave to act for 2 minutes.
- 10) Drain the slide and, without washing, dispense 10 drops of reagent E onto the section: leave to act for 2 minutes.
- 11) Wash in distilled water.
- 12) Dispense 10 drops of reagent F onto the section: leave to act for 3 minutes.
- 13) Leave to develop in running water for 5 minutes.
- 14) Dehydrate in the ascending series of alcohols, xylene and balsam.

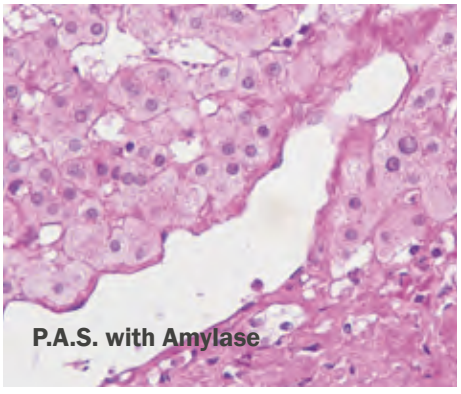
Result	
PAS-positive substances	magenta red
Nuclei	blue

Results

LIVER



LIVER



Bio-Optica

Perls

PRODUCT AND APPLICATION	CODE
Perls method for ferric iron	04-180807

Minimum number of tests that can be performed	72
Completion time	35 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	50 ml vertical histology jar, graduated cylinder and glass rod

Application

Method indicated for viewing reactive ferric iron on tissue sections, blood smears and bone marrow smears.
Specificity - the Perls reaction does not show all the iron present in the tissue: iron bound to hemoglobin, malaria pigment, ferritin, pigments deriving from the use of acid formalin and ferrous iron does not react.

Method

METHOD FOR HISTOLOGICAL SECTIONS

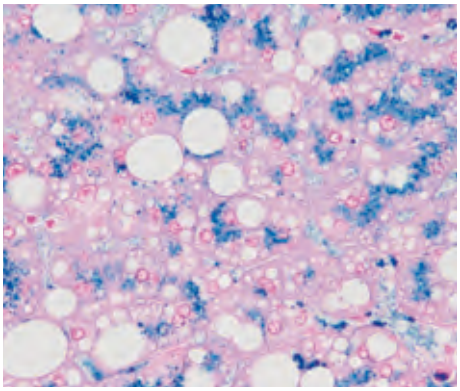
- 1) Bring the section to the distilled water.
- 2) Transfer the entire contents of bottle A to a 50 ml Coplin jar. Add, in order, 30 ml of distilled water and 4 ml of reagent B. Stir briefly. Immerse the section for 20 minutes.
- 3) Wash thoroughly in distilled water.
- 4) Dispense 10 drops of reagent C onto the section: leave to act for 5 minutes.
- 5) Wash in distilled water.
- 6) Dehydrate by means of the ascending series of alcohols; xylene and balsam

METHOD FOR BLOOD SMEARS AND BONE MARROW SMEARS

- 1) Fix the previously dried smears in methanol for 3 minutes. Remove the slide and leave to dry.
- 2) Transfer the entire contents of bottle A to a 50 ml Coplin jar. Add, in order, 30 ml of distilled water and 4 ml of reagent B. Stir briefly. Immerse the section for 20 minutes.
- 3) Wash thoroughly in distilled water.
- 4) Dispense 10 drops of reagent C onto the smears: leave to act for 5 minutes.
- 5) Wash in distilled water.
- 6) Dry in air.

LIVER

Results



Result	
Reactive ferric iron	blue
Nuclei	red

Notes:

False positives may be caused by three easily identifiable factors:

- ferrocyanide-hydrochloric acid solution not freshly prepared;
- ferric ions contaminating the glassware and section stretching water (rust), use of metal instruments in contact with the solution (forceps etc.);
- asbestosis: asbestos, if present, can generate a positive reaction.

Perls - Van Gieson

PRODUCT AND APPLICATION	CODE
Perls - Van Gieson method for ferric iron and connective tissue	04-181807

Minimum number of tests that can be performed	72
Completion time	35 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	50 ml vertical histology jar, graduated cylinder and glass rod

Application

Method indicated for simultaneous highlighting of reactive ferric iron, collagen and connective tissue on tissue sections.

Method

- 1) Bring the section to the distilled water.
- 2) Transfer the entire contents of bottle A to a 50 ml Coplin jar. Add, in order, 30 ml of distilled water and 4 ml of reagent B. Stir briefly. Immerse the section for 20 minutes.
- 3) Wash thoroughly in distilled water.
- 4) Dispense 10 drops of reagent C onto the section: leave to act for 10 minutes.
- 5) Wash in distilled water.
- 6) Dehydrate rapidly in the ascending series of alcohols, stopping for 1 minute in the last absolute; xylene and balsam.

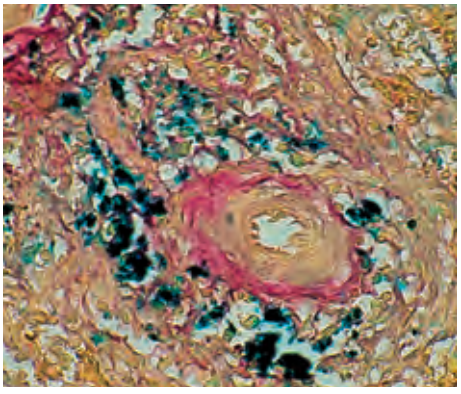
Result	
Reactive ferric iron	blue
Collagen	purple red
Cytoplasm, muscle, stratum corneum of the epithelium, glia and erythrocytes	yellow

Notes:

False positives may be caused by three easily identifiable factors:
- ferrocyanide-hydrochloric acid solution not freshly prepared;
- ferric ions contaminating the glassware and section stretching water (rust), use of metal instruments in contact with the solution (forceps etc.);
- asbestosis: asbestos, if present, can generate a positive reaction.

Results

LIVER



Bio-Optica

Picro Mallory Trichrome

PRODUCT AND APPLICATION	CODE
Picro Mallory Trichrome	04-021822

Minimum number of tests that can be performed	100
Completion time	40 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Not required

Application

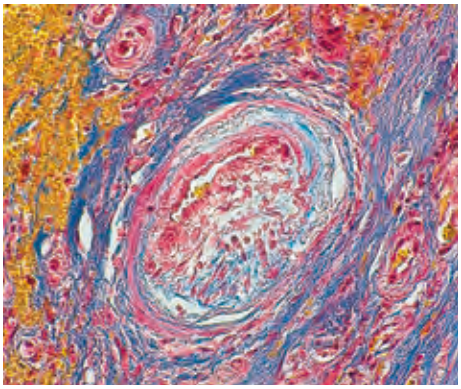
Trichrome stain recommended for connective sections.

Method

- 1) Bring section to distilled water.
- 2) Put on the section 5 drops of reagent A and 5 drops of reagent B: leave to act for 10 minutes.
- 3) Rinse in distilled water.
- 4) Blue 10 minutes in running tap water.
- 5) Put on the section 10 drops of reagent C: leave to act 2 minutes.
- 6) Rinse in distilled water.
- 7) Put on the section 10 drops of reagent D: leave to act 1 minute.
- 8) Rinse in distilled water.
- 9) Put on the section 10 drops of reagent E: leave to act 15 minutes.
- 10) Rinse in distilled water.
- 11) Put on the section 10 drops of reagent F: leave to act 1 minute.
- 12) Dehydrate rapidly through ascending alcohols, stop for 1 minute at the last absolute ethanol. Clear in xylene and mount.

CONNECTIVE TISSUE

Results



Result	
Nuclei:	dark brown
Collagen fibres:	dark blue
Ground substance of cartilage, bone, mucus, basophil granules of hypophysis and amyloid:	shades of blue
Neuroglia, axis cylinders and fibrin:	red
Acidophil granules of hypophysis:	orange
Myelin and erythrocytes:	Yellow
Elastic fibres:	pale pink to yellow

P.T.A.H. Phosphotungstic Acid Hematoxylin

PRODUCT AND APPLICATION	CODE
P.T.A.H. Phosphotungstic Acid Hematoxylin	04-060802

Minimum number of tests that can be performed	100
Completion time	13 minutes + overnight
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Not required

Application

The method, originally proposed for staining the glia, is now mainly indicated for differentiating smooth muscle from striated muscle (by staining the isotropic bands of myofibrils of the skeletal muscle); it is also one of the methods of choice for fibrin.

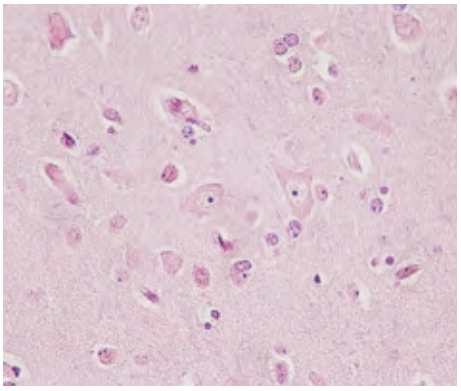
Method

- 1) Bring the section to the distilled water.
- 2) Dispense 5 drops of solution A onto the section and add 5 drops of solution B: leave to act for 5 minutes.
- 3) Wash in distilled water.
- 4) Dispense 10 drops of solution C onto the section: leave to act for 5 minutes.
- 5) Wash in distilled water.
- 6) Pour the entire contents of the bottle of reagent D into the empty container attached to the pack, immerse the section in it and leave overnight.
- 7) Wash quickly in distilled water (3-4 seconds).
- 8) Dehydrate the section rapidly in the ascending series of alcohols, stopping for 1 minute in the last absolute; xylene and balsam.

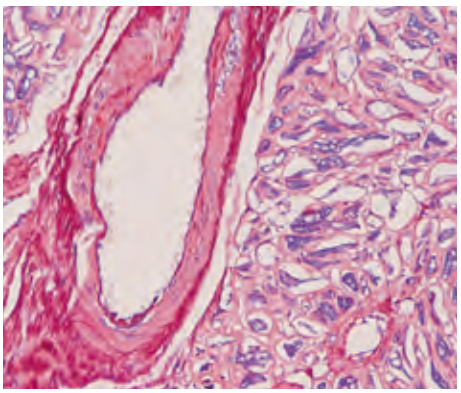
Result	
Nuclei, fibrin (most), myofibrils, astrocytes, certain elastic fibers, glia, myelin fibers	dark blue
Collagen, bone matrix, cartilage	brick red in various shades

Results

BRAIN



BLOOD VESSEL



Bio-Optica

Rapid frozen sections

PRODUCT AND APPLICATION	CODE
Rapid frozen sections H&E staining kit	04-061010

Minimum number of tests that can be performed	100
Completion time	Approximately 3 minutes
Shelf life	2 years
Storage conditions	15-25°C
Additional equipment	100 ml jar for buffer preparation, jar for washing

Application

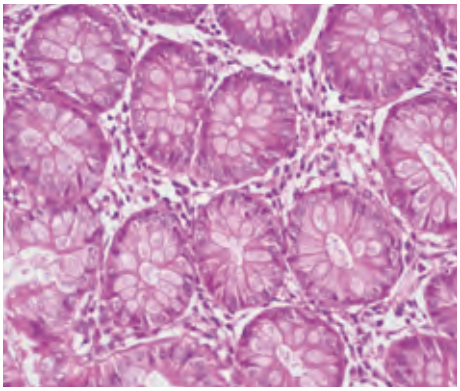
Rapid method for staining cryostat sections with a thickness of 6 microns.

Method

- 1) Preparation of the developing solution: dispense 10 drops of reagent B into a 100 ml jar. The kit is sufficient for the preparation of 100 developing solutions, we therefore recommended that you change the work solution frequently.
- 2) Place the section in the container labeled REAGENT A for 45 – 60 seconds.
- 3) Wash in tap water, 5 immersions.
- 4) Place in the developing solution, 5 immersions.
- 5) Wash in tap water, 5 immersions.
- 6) Place the section in the container labeled REAGENT C for 30 seconds.
- 7) 95° ethanol, 5 immersions.
- 8) 95° ethanol, 5 immersions.
- 9) Absolute ethanol, 5 immersions.
- 10) Absolute ethanol, 5 immersions.
- 11) Xylene, Bio-Clear or X-Free, 10 immersions.
- 12) Xylene, Bio-Clear or X-Free, 10 immersions.

COLON

Results



Result	
Cytoplasm, connective tissue	pink in various shades and intensities
Nuclei	blue

Congo Red

PRODUCT AND APPLICATION	CODE
Highman's Congo red	04-210822

Minimum number of tests that can be performed	100
Completion time	35 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Not required

Application

Method for highlighting amyloid on tissue sections.

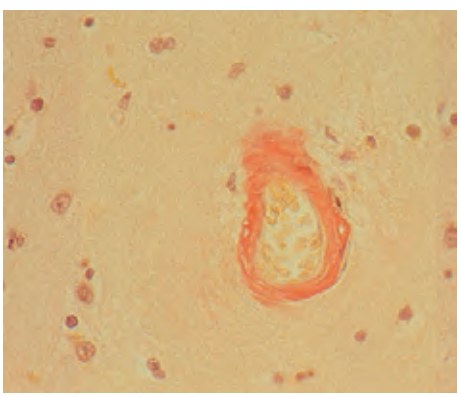
Method

- 1) Bring the section to the distilled water.
- 2) Dispense 10 drops of reagent A onto the section: leave to act for 15 minutes.
- 3) Wash in distilled water.
- 4) Dispense 10 drops of reagent B onto the section: leave to act for 30 seconds.
- 5) Wash in running tap water for 5 minutes.
- 6) Dispense 10 drops of reagent C onto the section: leave to act for 2 minutes.
- 7) Dispense 10 drops of reagent D onto the section: leave to act for 5 minutes.
- 8) Leave to develop in tap water for 5 minutes.
- 9) Dehydrate by means of the ascending series of alcohols; xylene and balsam.

Results

BLOOD VESSEL

Result	
Amyloid substance	brick red and birefringent in polarized light
Nuclei	blue



Bio-Optica

Sirius Red

PRODUCT AND APPLICATION	CODE
Sirius Red	04-210923

Minimum number of tests that can be performed	100
Completion time	1 hour 15 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Not required

Application

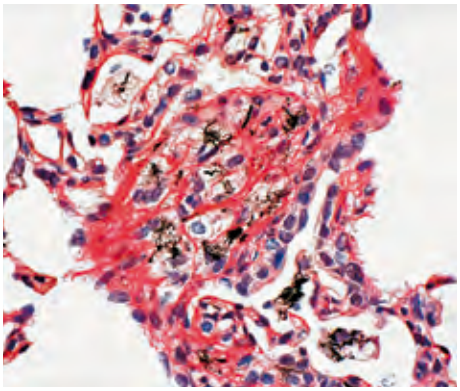
Method for highlighting amyloid in tissues fixed in formalin and embedded in paraffin.

Method

- 1) Bring the section to the distilled water.
- 2) Prepare the humid chamber and place the slide in it with the section facing up. Dispense 10 drops of reagent A onto the section, close the humid chamber and incubate in an oven at 60 °C. Leave to act for 60-90 minutes.
- 3) Dispense 10 drops of reagent B onto the section for 1 - 2 minutes.
- 4) Drain the slide and dispense 10 drops of reagent C onto the section: leave to act for 1 - 2 minutes.
- 5) Dispense 10 drops of reagent D onto the section. Leave to act for 5 minutes.
- 6) Leave to develop in running water for 5 minutes.
- 7) Dehydrate in the ascending series of alcohols, xylene and balsam.

AMYLOID SUBSTANCE

Results



Result	
Amyloid substance	pink - red
Nuclei	blue

PRODUCT AND APPLICATION	CODE
Picrosirius Red	04-121873

Minimum number of tests that can be performed	100
Completion time	60 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Not required

Picrosirius Red

Application

Method indicated for highlighting collagen fibers and bile pigments on tissue sections fixed in formalin and embedded in paraffin.

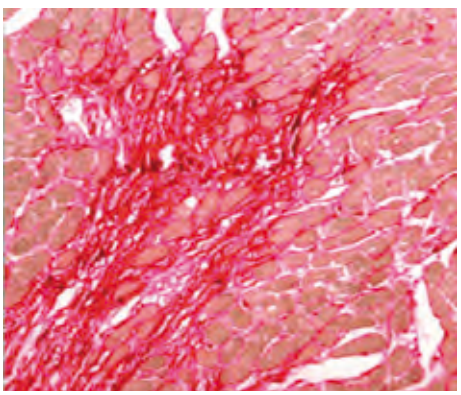
Method

- 1) Bring the section to the distilled water.
- 2) Dispense 10 drops of reagent A onto the section: leave to act for 50 minutes.
- 3) Wash briefly in distilled water.
- 4) Dispense 10 drops of reagent B onto the section: leave to act for 2 minutes. Repeat twice.
- 5) Wash briefly in distilled water and drain the slide.
- 6) Dispense 10 drops of reagent C onto the section: leave to act for 3 minutes.
- 7) Leave to develop in tap water: 3 minutes.
- 8) Wash in distilled water and dehydrate rapidly by means of the ascending series of alcohols, leaving for 1 minute in the last absolute: xylene and balsam.

Results

LIVER

Result	
Bilirubin	green
Collagen fibers	red
Nuclei	blue
Erythrocytes	red



Bio-Optica

Methenamine Silver

PRODUCT AND APPLICATION	CODE
Methenamine Silver P.A.S.M.	04-043822

Minimum number of tests that can be performed	100
Completion time	1 hour 15 minutes
Shelf life	1 year
Storage conditions	2-8°C
Additional equipment	Oven

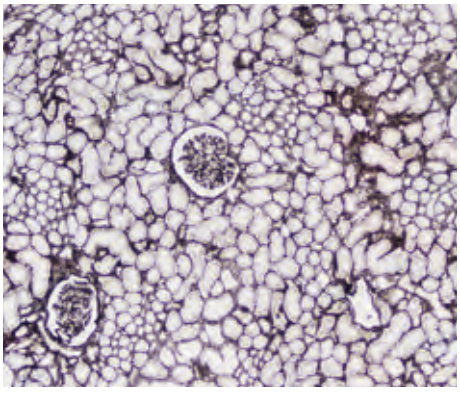
Application

Method used for viewing argyrophilic elements and mucopolysaccharides (basal membranes, mycetes, bacteria, etc.) on tissue sections. It is the method of choice for studying the basal membrane in renal biopsy.

Method

- 1) Bring the sections to the distilled water.
- 2) Dispense 10 drops of reagent A onto the section: leave to act for 30 minutes.
- 3) Wash in distilled water.
- 4) Prepare the humid chamber and place the slide in it with the section facing up. Dispense 10 drops of reagent B into the small dish attached to the pack, add 10 drops of reagent C and 10 drops of reagent D, stir and place the solution thus obtained on the section: close the humid chamber and incubate in an oven at 60°C. Leave to act for 30-40 minutes.
- 5) Remove the humid chamber from the oven, open the lid and check the tone of the impregnation: if the blackening is correct, leave the slide to cool for 5 minutes and then wash it in distilled water; if it is insufficient, incubate in the oven again and check every 5 minutes.
- 6) Dispense 10 drops of reagent E onto the section: leave to act for 1 minute.
- 7) Wash in distilled water.
- 8) Dispense 10 drops of reagent F onto the section: leave to act for 1 minute.
- 9) Wash in distilled water.
- 10) Dehydrate by means of the ascending series of alcohols, xylene and balsam.

KIDNEY **Results**



Result	
Basal membranes, glycogen, dish of mycetes and bacteria	black

WARNINGS

As for all reactions involving silver salts, it is essential to use rigorously clean glassware and good-quality distilled or deionized water. Furthermore, do not bring metal instruments (forceps, etc.) into contact with reagents containing silver salts.

Van Gieson Trichrome

PRODUCT AND APPLICATION	CODE
Van Gieson Trichrome	04-030802

Minimum number of tests that can be performed	100
Completion time	35 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Not required

Application

Method of choice for connective tissue, particularly indicated for highlighting collagen fibers and differentiating them from connective tissue.

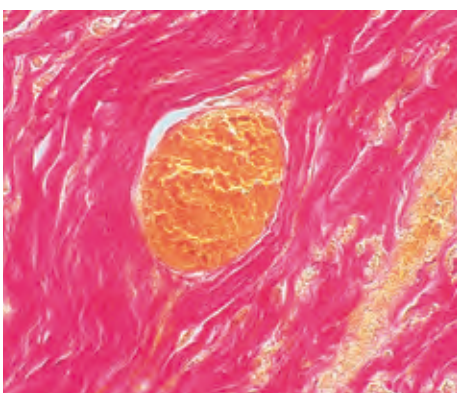
Method

- 1) Bring the section to the distilled water.
- 2) Dispense 5 drops of reagent A onto the section and add 5 drops of reagent B : leave to act for 10 minutes.
- 3) Leave to develop in tap water for 10 minutes.
- 4) Dispense 10 drops of solution C onto the section: leave to act for 10 minutes.
- 5) Wash quickly (2-3 seconds) in distilled water and dehydrate rapidly in the ascending series of alcohols, stopping for 1 minute in the last absolute; xylene and balsam.

Results

CONNECTIVE TISSUE

Result	
Nuclei	black
Collagen fibers	purple red
Cytoplasm, smooth and striated muscle, stratum corneum of the epithelium, glia and erythrocytes	yellow



Bio-Optica

Verhoeff

PRODUCT AND APPLICATION	CODE
Verhoeff	04-056802

Minimum number of tests that can be performed	100
Completion time	60 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Not required

Application

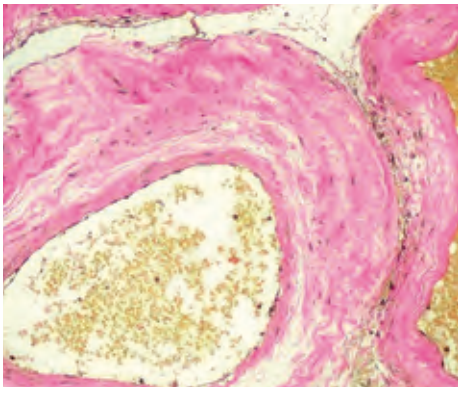
Method for demonstrating elastic fibers on histological sections, particularly indicated for vascular pathology.

Method

- 1) Bring the section to the distilled water.
- 2) Dispense 10 drops of reagent A onto the section: leave to act for 30 minutes.
- 3) Wash in distilled water.
- 4) Differentiate in tap water.
- 5) Place the slide in the humid chamber and dispense 8 drops of reagent B + 4 drops of reagent C + 4 drops of reagent D onto the section. Leave to act for 25 minutes.
- 6) Wash in distilled water.
- 7) Differentiate with reagent E: 2 or 3 changes of 15 seconds each.
- 8) Wash thoroughly in distilled water.
- 9) Dispense 10 drops of reagent F onto the section: leave to act for 1 minute.
- 10) Wash in distilled water.
- 11) Dehydrate by means of the ascending series of alcohols; xylene and balsam.

Results

ARTERY



Result	
Elastic fibers and nuclei	black
Collagen	red
Other tissue elements	yellow

Von Kossa

PRODUCT AND APPLICATION	CODE
Von Kossa method for calcium	04-170801

Minimum number of tests that can be performed	100
Completion time	1 hour 25 minutes
Shelf life	1 year
Storage conditions	2-8°C
Additional equipment	Not required

Application

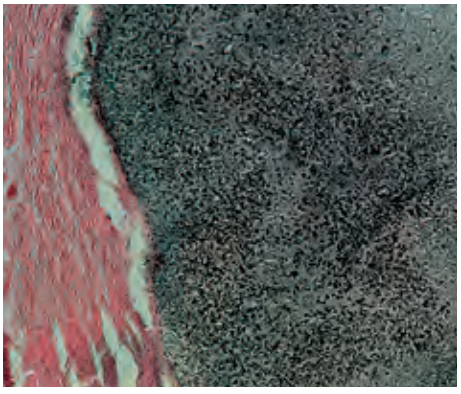
Method indicated for viewing calcium ions on histological sections.

Method

- 1) Bring the section to the distilled water.
- 2) Dispense 10 drops of reagent A onto the section: leave to act for 10 minutes.
- 3) Wash thoroughly in distilled water.
- 4) Dispense 10 drops of reagent B onto the section: leave to act in the dark for 1 minutes.
- 5) Wash thoroughly in distilled water.
- 6) Dispense 10 drops of distilled water onto the section and add 10 drops of reagent C: leave to act for 5 minutes (until the silver salts turn black).
- 7) Wash in distilled water.
- 8) Dispense 10 drops of reagent D onto the section: leave to act for 5 minutes.
- 9) Wash in distilled water.
- 10) Dispense 10 drops of reagent E onto the section: leave to act for 5 minutes.
- 11) Wash in distilled water and dehydrate in the ascending series of alcohols; xylene and balsam.

Result	
Sites where calcium salts were present	black
Nuclei	red

BONE **Results**



Bio-Optica

Warthin-Starry

PRODUCT AND APPLICATION	CODE
Warthin-Starry method for spirochetes	04-040903

Minimum number of tests that can be performed	40
Completion time	1 hour 45 minutes
Shelf life	1 year
Storage conditions	2-8°C
Additional equipment	Oven, jar for buffer dilution, graduated pipette, glass rod

Application

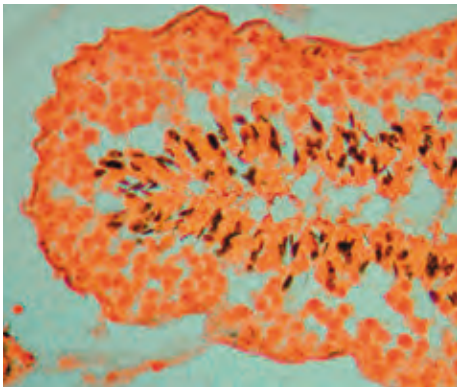
Method for highlighting spirochetes.

Method

- 1) Bring the section to the distilled water.
- 2) Prepare the impregnating solution: pour 13 ml of distilled water into the container, then add 4.5 ml of reagent A and 20 drops of reagent B. Stir briefly with a glass rod previously washed in distilled water.
- 3) Place the section in the solution and incubate for 90 minutes at 60-70°C.
- 4) Remove the container from the oven and leave to cool for 5 minutes.
- 5) While the impregnation reaction takes place, prepare the developing solution.
  Note: you are advised to carry out the indicated operations during the last 12 minutes of incubation started in step 3. Preheat one bottle C and one bottle D in an oven at 50°C for 10 minutes.
  Pour the entire contents of the two preheated bottles into the second container available for slides (beware of the temperature of the bottles – use protective gloves), stir briefly with a glass rod previously washed in distilled water and then pour in the entire contents of one bottle E and stir again.
- 6) Place the section in the developing solution you have just prepared and place in an oven at 50°C for 5 – 10 minutes.
- 7) Wash in hot running water for 2 minutes.
- 8) Dehydrate by means of the ascending series of alcohols, xylene and balsam.

Results

SPIROCHETES



Result	
Spirochetes and other micro-organisms	black
Background	golden brown

WARNINGS

- For washing, it is imperative to use top-quality distilled water.
- Do not use Poly-L-Lysine coated slides.
- Do not use metal objects (racks, forceps).

Weigert - long method

PRODUCT AND APPLICATION	CODE
Weigert for elastic fibers (long method)	04-050802

Minimum number of tests that can be performed	100
Completion time	Overnight + 25 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Histology jar with lid

Application

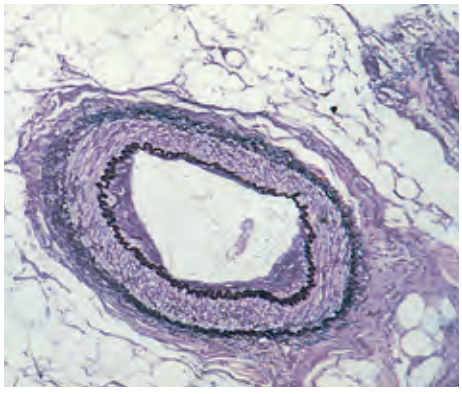
Method indicated for demonstrating elastic fibers on histological sections.

Method

- 1) Bring the section to the distilled water.
- 2) Dispense 5 drops of solution A onto the section and add 5 drops of solution B: leave to act for 5 minutes.
- 3) Wash in distilled water.
- 4) Dispense 10 drops of solution C onto the section: leave to act for 5 minutes.
- 5) Wash in distilled water.
- 6) Pour the reagent D into a vertical histology jar, immerse the section in it and close firmly: leave to act overnight.
  After use, in order to minimize evaporation of the ethanol, you are advised to return the solution to its original bottle.
- 7) Wash in distilled water.
- 8) Dispense 10 drops of solution E onto the section: leave to act for 10 minutes.
- 9) Wash in distilled water.
- 10) Dehydrate by means of the ascending series of alcohols; xylene and balsam.

Result	
Elastic fibers	from dark blue to black

BLOOD VESSEL **Results**



Bio-Optica

Weigert - rapid method

PRODUCT AND APPLICATION	CODE
Weigert for elastic fibers (rapid method)	04-052812

Minimum number of tests that can be performed	100
Completion time	60 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Graduated pipette

Application

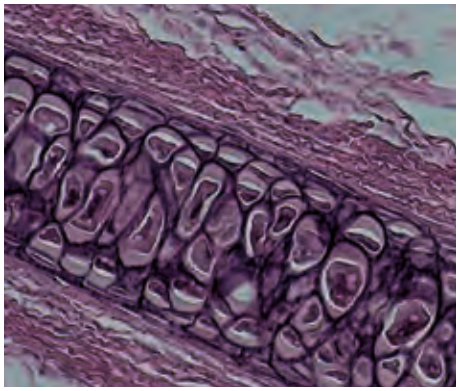
Method indicated for demonstrating elastic fibers on histological sections, particularly indicated for vascular pathology.

Method

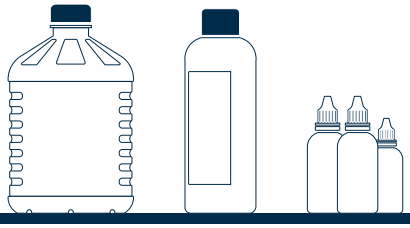
- 1) Bring the section to the distilled water.
- 2) Dispense 10 drops of solution A onto the section: leave to act for 5 minutes.
- 3) Wash in distilled water.
- 4) Prepare the humid chamber as follows: soak the disc of filter paper with 20 drops of reagent B, insert the slide in the humid chamber and dispense 10 drops of reagent C onto the section. Close the lid and incubate for 30 minutes.
- 5) Wash in distilled water.
- 6) Dispense 10 drops of reagent D onto the section: leave to act for 2 minutes.
- 7) Wash in running water for 5 minutes
- 8) Wash in distilled water.
- 9) Dispense 10 drops of reagent E onto the section: leave to act for 5 minutes.
- 10) Wash in distilled water.
- 11) Dehydrate by means of the ascending series of alcohols; xylene and balsam.

Results

ELASTIC FIBERS



Result	
Elastic fibers	purple - brown
Nuclei	red



Weigert Van Gieson long method

PRODUCT AND APPLICATION	CODE
Weigert Van Gieson for elastic fibers and connective tissue(long method)	04-051802

Minimum number of tests that can be performed	100
Completion time	50 minutes + overnight
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Vertical histology jar with lid

Application

Combined method for viewing elastic fibers, connective tissue, collagen and nuclei on the same preparation.
Van Gieson trichrome is the most commonly used method in association with Weigert staining for elastic fibers.

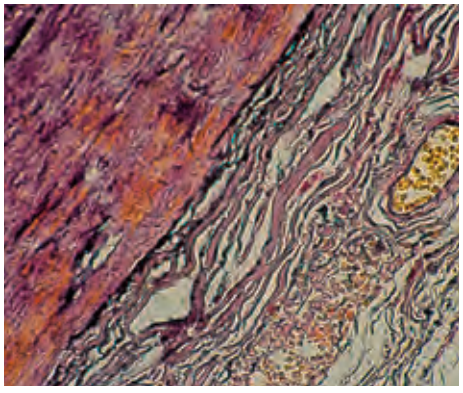
Method

- 1) Bring the section to the distilled water.
- 2) Dispense 10 drops of solution A onto the section: leave to act for 5 minutes.
- 3) Wash in distilled water.
- 4) Pour the reagent B into a vertical histology jar, immerse the section in it and close firmly: leave to act overnight. After use, you are advised to return the solution to its original bottle.
- 5) Wash in distilled water.
- 6) Dispense 10 drops of reagent C onto the section: leave to act for 10 minutes.
- 7) Wash in distilled water.
- 8) Dispense 5 drops of solution D onto the section and add 5 drops of solution E: leave to act for 10 minutes.
- 9) Leave to develop in tap water for 10 minutes.
- 10) Dispense 10 drops of solution F onto the section: leave to act for 7 minutes.
- 11) Wash quickly (2-3 seconds) in distilled water and dehydrate rapidly in the ascending series of alcohols, stopping for 1 minute in the last absolute; xylene and balsam.

Result	
Elastic fibers	purple - brown
Nuclei	black
Collagen	red, in various shades
Connective tissue, erythrocytes	yellow

Results

CONNECTIVE TISSUE AND ELASTIC FIBERS



Bio-Optica

Weigert Van Gieson rapid method

PRODUCT AND APPLICATION	CODE
Weigert Van Gieson for elastic fibers and connective tissue(rapid method)	04-053812

Minimum number of tests that can be performed	100
Completion time	1 hour 20 minutes
Shelf life	2 years
Storage conditions	15-25°C
Additional equipment	Graduated pipette

Application

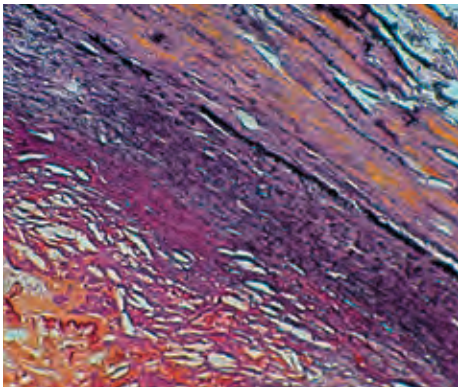
Combined method for viewing elastic fibers, connective tissue, collagen and nuclei on the same preparation.
Van Gieson trichrome is the most commonly used method in association with Weigert staining for elastic fibers.

Method

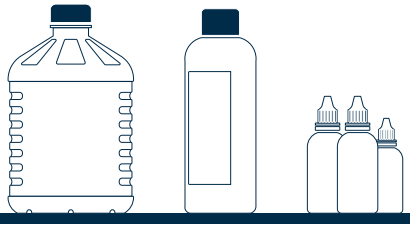
- 1) Bring the section to the distilled water.
- 2) Dispense 10 drops of solution A onto the section: leave to act for 5 minutes.
- 3) Wash in distilled water.
- 4) Prepare the humid chamber as follows: soak the disc of filter paper with 20 drops of reagent B, insert the slide in the humid chamber and dispense 10 drops of reagent C onto the section. Close the lid and incubate for 30 minutes.
- 5) Wash in distilled water.
- 6) Dispense 10 drops of reagent D onto the section: leave to act for 2 minutes.
- 7) Wash in tap water for 5 minutes.
- 8) Wash in distilled water.
- 9) Dispense 5 drops of solution E onto the section and add 5 drops of solution F: leave to act for 10 minutes.
- 10) Leave to develop in tap water for 10 minutes.
- 11) Dispense 10 drops of solution G onto the section: leave to act for 10 minutes.
- 12) Wash quickly (2-3 seconds) in distilled water and dehydrate rapidly in the ascending series of alcohols, stopping for 1 minute in the last absolute; xylene and balsam.

Results

CONNECTIVE TISSUE AND ELASTIC FIBERS



Result	
Elastic fibers	purple - brown
Nuclei	black
Collagen	red, in various shades
Connective tissue, erythrocytes	yellow



Ziehl-Neelsen

PRODUCT AND APPLICATION	CODE
Ziehl-Neelsen for mycobacteria	04-110802

Minimum number of tests that can be performed	100
Completion time	50 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Not required

Application

For highlighting pathogenic mycobacteria with particular regard to Koch's bacillus, on histological sections, sputum and culture smears, and appositions.

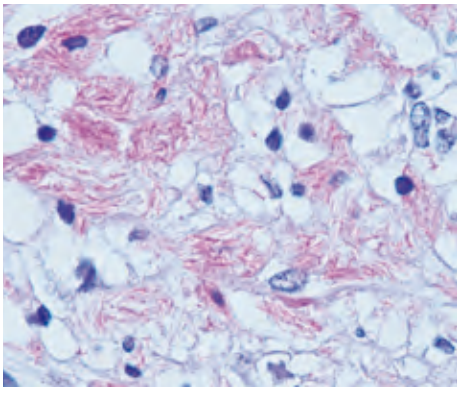
Method

- 1) Bring the sections to the distilled water.
- 2) Dispense 10 drops of reagent A onto the section: leave to act for 10 minutes.
- 3) Wash in distilled water.
- 4) Dispense 10 drops of reagent B onto the section: leave to act for 30 minutes.
- 5) Wash in distilled water and dry the slide with filter paper.
- 6) Dispense 10 drops of reagent C onto the section: leave to act for 1 minute.
- 7) Wash in tap water for 3 minutes.
- 8) Dispense 10 drops of reagent D onto the section: leave to act for 2 minutes.
- 9) Wash in distilled water, develop for 5 minutes in running water.
- 10) Dehydrate by means of the ascending series of alcohols, xylene and balsam.

Results

LUNG

Result	
Koch's bacillus and other acid-resistant elements	red
Nuclei	blue – violet



Bio-Optica

Ziehl-Neelsen Fite

PRODUCT AND APPLICATION	CODE
Ziehl-Neelsen Fite for mycobacteria	04-111802

Minimum number of tests that can be performed	100
Completion time	45 minutes
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Not required

Application

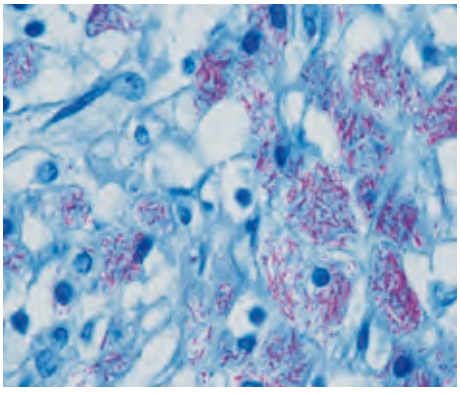
For highlighting pathogenic mycobacteria with particular regard to Koch's and Hansen's bacillus, on histological sections, sputum and culture smears, and appositions.

Method

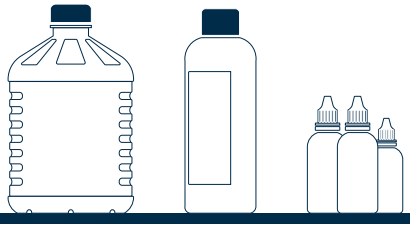
- 1) Bring the sections to the distilled water.
- 2) Dispense 10 drops of reagent A onto the section: leave to act for 10 minutes.
- 3) Wash in distilled water.
- 4) Dispense 10 drops of reagent B onto the section: leave to act for 30 minutes.
- 5) Wash in distilled water and dry the slide with filter paper.
- 6) Dispense 10 drops of reagent C onto the section: leave to act for 1 minute.
- 7) Wash in tap water for 3 minutes.
- 8) Dispense 10 drops of reagent D onto the section: leave to act for 1 minute.
- 9) Wash in distilled water.
- 10) Dehydrate by means of the ascending series of alcohols, xylene and mounting medium.

LUNG

Results



Result	
Koch's bacillus, Hansen's bacillus and other acid-resistant elements	red – violet
Background contrast	light blue



Kits and solutions for enzyme histochemistry

Microscopic examination of sections of muscle biopsies is an essential tool in the diagnosis of neuromuscular disorders.

Any laboratory choosing to conduct histo-enzymatic tests on muscle biopsies encounters a series of problems:

- high toxicity of certain reagents
- solutions that are difficult and complex to standardize
- storage of solutions at -20 °C
- poor reproducibility of final results.

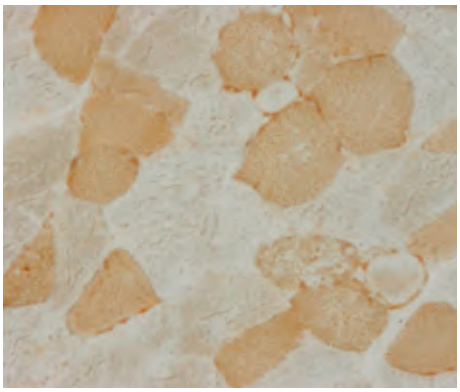
To overcome all these problems, Bio-Optica has developed ready-to-use kits for enzyme histochemistry. Enzyme histochemistry kits eliminate the difficulties and risks associated with the preparation of stain solutions, thus ensuring reproducible results.

PRODUCT AND APPLICATION	CODE
ATPase Method of choice for determining the types of muscle fibers. For use with cryostat sections of striated muscle with a thickness of 8 µm. The solutions, supplied in ready-to-use form, make it possible to perform the method on three serial sections of the sample simultaneously. For correct application of the method, it is necessary to use reagents that have been brought to room temperature.	30-30125LY

Result	
Nuclei	blue
Section 10.4 - preincubation at pH 10.4	
Type 1 fibers	white - beige
Type 2A fibers	brown - black
Type 2B fibers	brown - black
Section 4.7 - preincubation at pH 4.7	
Type 1 fibers	brown
Type 2A fibers	white - beige
Type 2B fibers	brown - dark brown
Section 4.3 - preincubation at pH 4.3	
Type 1 fibers	brown
Type 2A fibers	white - beige
Type 2B fibers	beige

ATPase

Cytochrome C oxidase

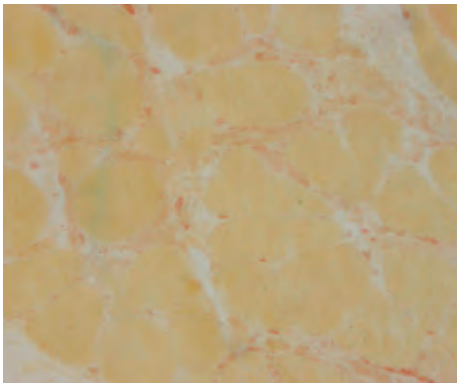


PRODUCT AND APPLICATION	CODE
Cytochrome C oxidase	30-30115LY
Evaluation of Cytochrome C oxidase activity.	

Result

Activity of Cytochrome C oxidase	beige
positive	

Non-specific esterase

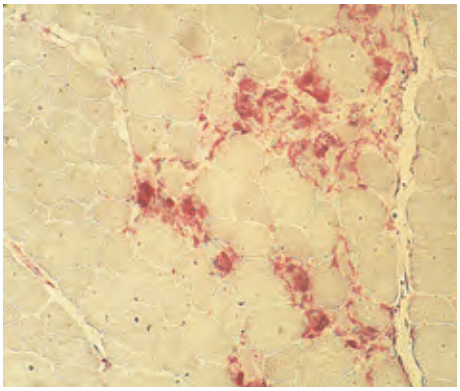


PRODUCT AND APPLICATION	CODE
Non-specific esterase	30-30122LY
Highlighting positive enzymatic activity of esterase in denervated fibers.	

Result

Angular atrophic fibers	beige
Muscle plaques	brown
Lipofuscins	brown
Lysosomal activity	brown

Acid phosphatase



PRODUCT AND APPLICATION	CODE
Acid phosphatase	30-30118LY
Highlighting enzymatic activity of acid phosphatase. Present in macrophages and lysosomes; identifies necrosis and regeneration.	

Result

Positive enzymatic activity of acid phosphatase	red
Background and nuclei	green

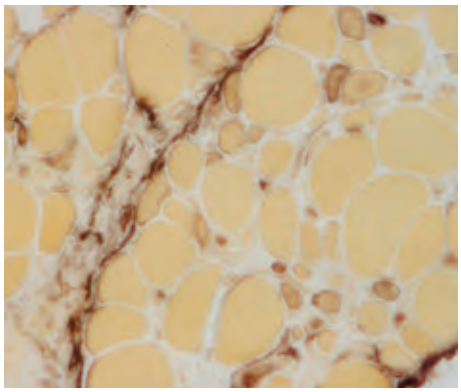
Alkaline phosphatase

PRODUCT AND APPLICATION	CODE
Alkaline phosphatase	30-30121LY

Evaluating enzymatic activity of alkaline phosphatase.
Useful for highlighting the sites of phagocytosis and inflammation in muscle biopsies.

Result

Positive enzymatic activity of alkaline phosphatase	black
Background	yellow ochre



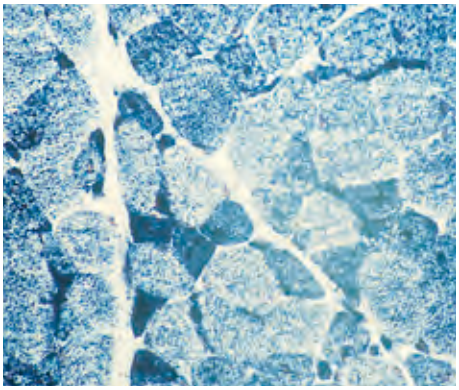
Phosphofructokinase (PFK)

PRODUCT AND APPLICATION	CODE
Phosphofructokinase (PFK)	30-30117LY

Highlighting enzymatic activity of phosphofructokinase (PFK), useful for determining whether glycogen storage disease depends on a deficiency of phosphofructokinase or on other enzymes involved in the metabolism of glycogen.

Result

Positive PFK activity	dark blue



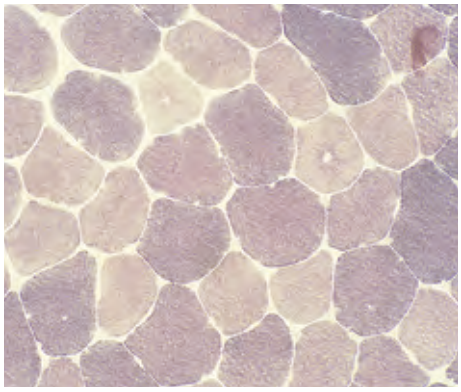
Phosphorylase

PRODUCT AND APPLICATION	CODE
Phosphorylase	30-30123LY

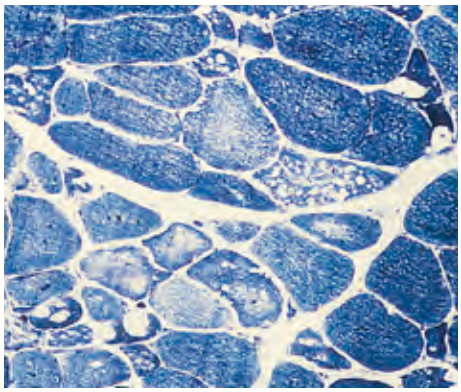
Highlighting enzymes belonging to the phosphorylase class involved in glycogenolysis.

Result

Phosphorylase enzyme activity	various shades of blue



Myoadenylate deaminase

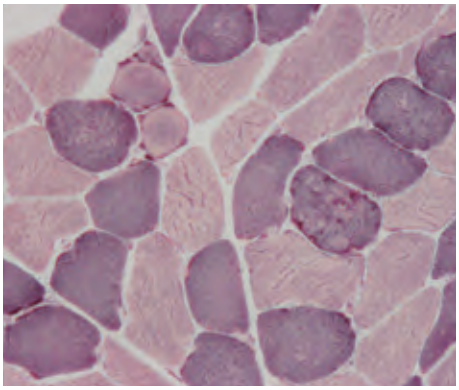


PRODUCT AND APPLICATION	CODE
Myoadenylate deaminase	30-30116LY
Highlighting of enzymatic activity of myoadenylate deaminase (AMPDA).	

Result

Positive enzymatic activity of myoadenylate deaminase	blue

NADH diaphorase



PRODUCT AND APPLICATION	CODE
NADH diaphorase	30-30113LY
Evaluation of NADH diaphorase activity. Staining useful for distinguishing type 1 and type 2 muscle fibers, often used in conjunction with ATPase evaluation.	

Result

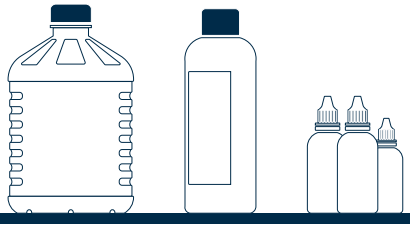
Sites of enzymatic activity of NADH diaphorase	gray - blue
Type 1 fibers	dark blue
Type 2 fibers	light blue

Succinate dehydrogenase

PRODUCT AND APPLICATION	CODE
Succinate dehydrogenase	30-30114LY
Evaluation of enzymatic activity of succinate dehydrogenase (SDH) detected specifically in the mitochondria.	

Result

Positive SDH activity	gray – blue

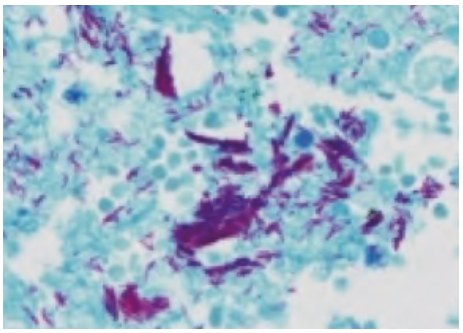


PRODUCT AND APPLICATION	CODE
Ziehl-Neelsen Fite for microbiology	04-111803
To show pathogenic mycobacteria (especially Koch's bacillus) in sputum smears and culture smears.	

Result

Koch' s bacillus and other acid resistant elements	red
Background	blue

Koch's bacilli

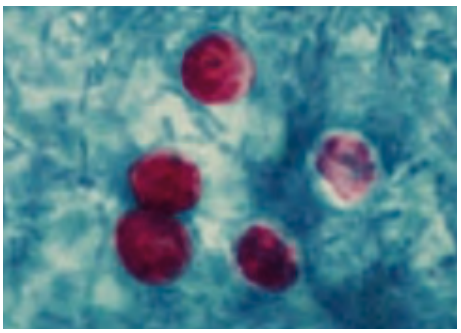


PRODUCT AND APPLICATION	CODE
Ziehl-Neelsen for Cryptosporidium	04-110803
To show Cryptosporidium sp. oocysts in fecal smears.	

Result

Cryptosporidium sp. oocysts (4 - 6 µm diameter)	red
Background	Pale green

Cryptosporidium

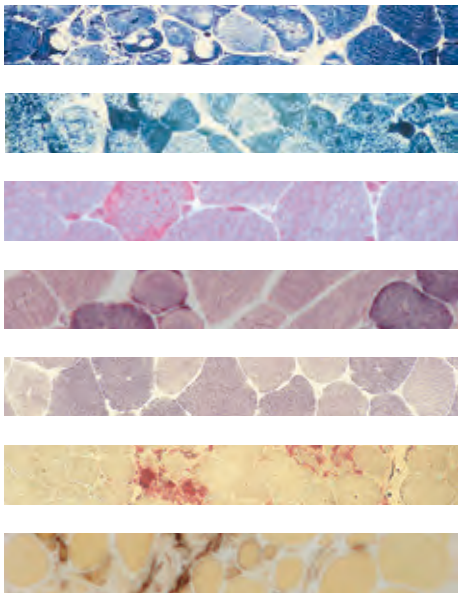


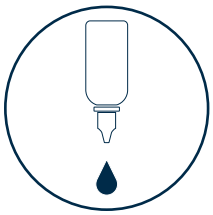
Fixatives for enzyme histochemistry

PRODUCT	PACK	DESCRIPTION	CODE
Backer fixative	1x500 ml	Facilitates staining with Oil Red O	30-30111
Fixative for acid phosphatase	1x100 ml	For use in enzyme histochemical staining for acid phosphatase	30-30120

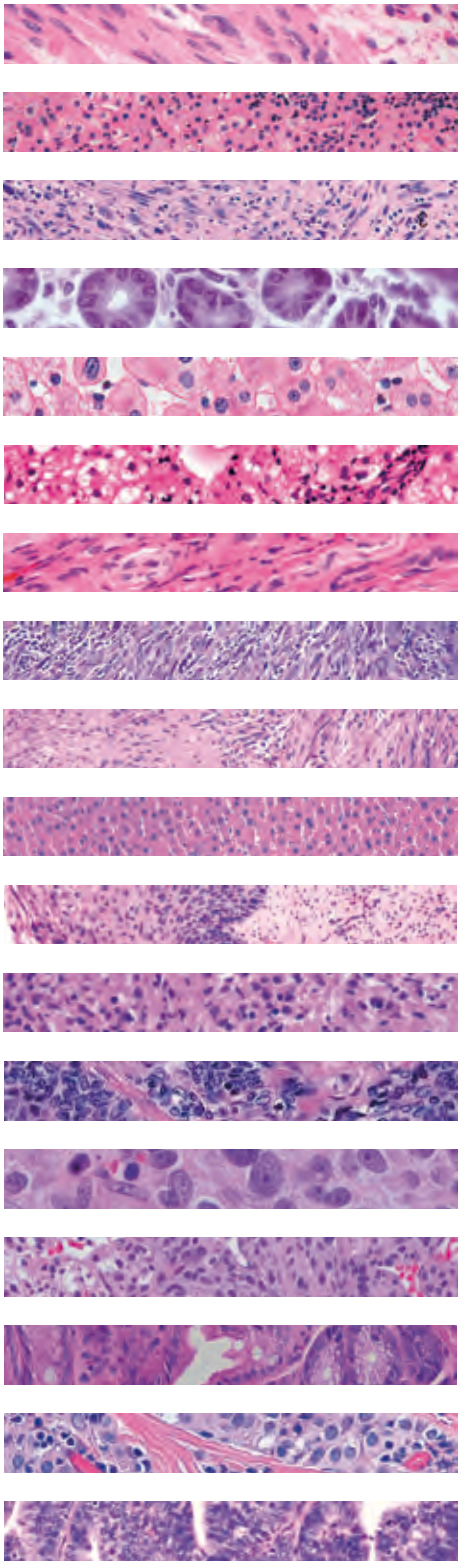
Staining solutions for enzyme histochemistry

PRODUCT	PACK	DESCRIPTION	CODE
Oil Red O solution	1x100 ml	Specific stain for lipids	30-30112
Buffered methyl green solution	1x100 ml	Green nuclear stain	30-30119
Gomori trichrome solution	1x100 ml	Stain for the morphological study of muscle fiber and connective tissue	30-30110





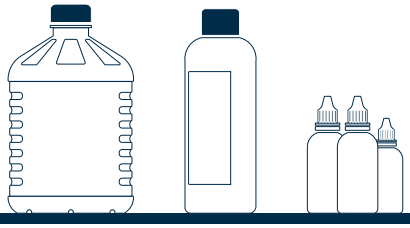
Bio-Optica



Hematoxylin

Bio-Optica provides operators with a complete range of nuclear stains; all solutions are stable and yield excellent cellular details.

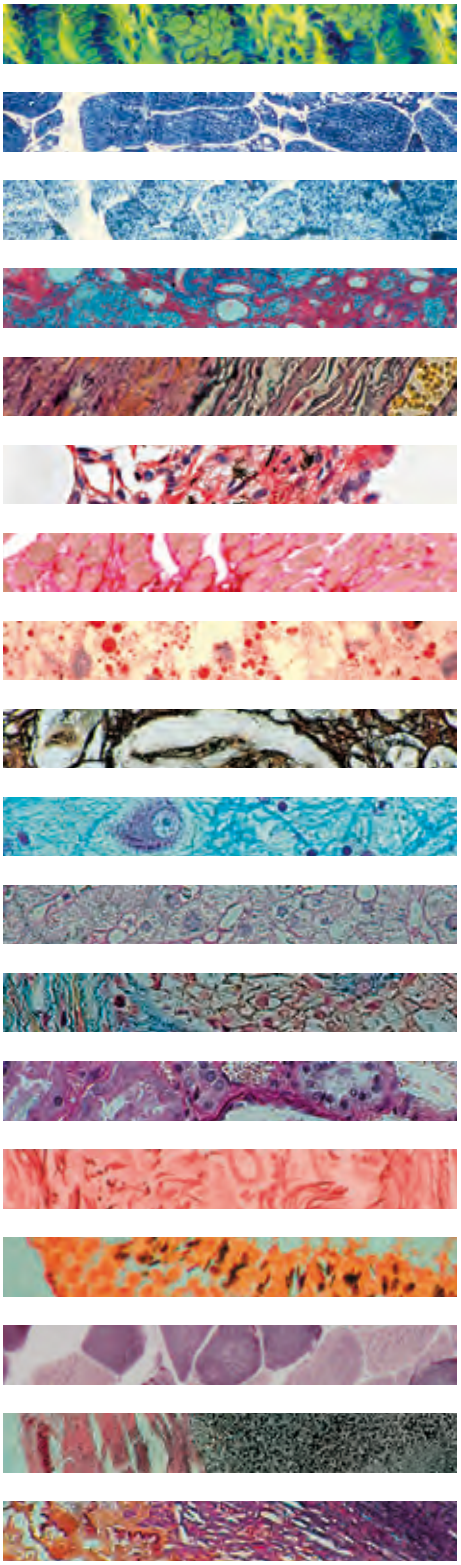
PRODUCT AND DESCRIPTION	PACK	CODE
Mayer's hemalum	1x500 ml	05-M06002
Medium-intensity stain	1x1 l	05-06002/L
	1x2,5 l	05-06002E
Harris hematoxylin for histology	1x500 ml	05-M06004
Stain with a high concentration of hematoxylin	1x1 l	05-06004/L
	1x2,5 l	05-06004E
Carazzi's hemalum	1x500 ml	05-M06012
Lower concentration of hematoxylin	1x1 l	05-06012/L
Gill 1 hematoxylin	1x1 l	05-06013/L
Similar to Carazzi's hemalum		
Gill 2 hematoxylin	1x500 ml	05-M06014
Similar to Mayer's hemalum	1x1 l	05-06014/L
	1x2,5 l	05-06014E
Gill 3 hematoxylin	1x500 ml	05-M06015
Similar to Harris hematoxylin for histology	1x1 l	05-06015/L
	1x2,5 l	05-06015E
Weigert A ferric hematoxylin	1x150 ml	05-B06008/A
For trichrome staining	1x1 l	05-06008A/L
Weigert B ferric hematoxylin	1x150 ml	05-B06008/B
For trichrome staining	1x1 l	05-06008B/L
P.T.A.H. – Phosphotungstic Acid Hematoxylin	1x1 l	05-10017/L
For staining muscle fibers and nerves		



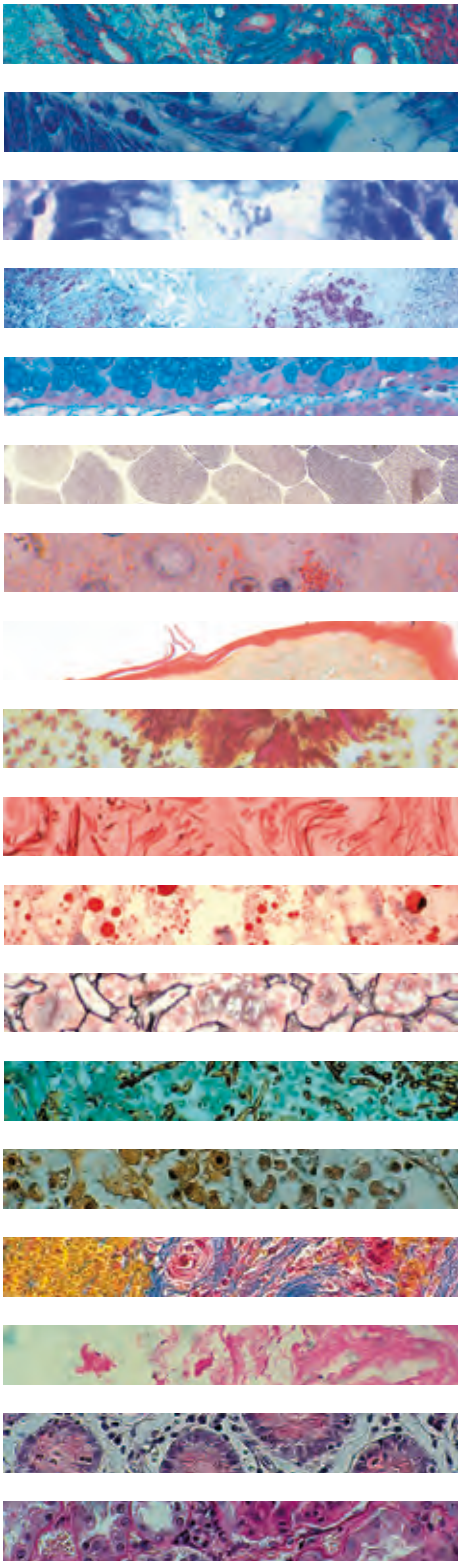
Histology solutions

In addition to a number of important functional benefits (safety, time saving, reduced workload, easy estimation of costs per test), Bio-Optica's ready-to-use solutions yield excellent, reproducible results. These are essential characteristics for meeting the requirements of laboratories adhering to high quality standards.

PRODUCT AND DESCRIPTION	PACK	CODE
Alcian Blue pH 2,5 Mowry	1x500 ml	05-M26003
	1x1 l	05-26003/L
Masson Aniline Blue	1x150 ml	05-B10006
Basic Fuchsin solution	1x1 l	05-07012/L
Cresyl Blue	1x150 ml	05-B14002
New Blue Methylene	1x150 ml	05-B14003
Toluidine Blue polychrome	1x150 ml	05-B23001
	1x500 ml	05-M23001
Mayer's Carmalum	1x150 ml	05-B07009
Crystal violet Metachromatic	1x150 ml	05-B31001
Eosin Y aqueous solution 1%	1x500 ml	05-M10007
	1x1 l	05-10007/L
	1x2,5 l	05-10007E
Eosin Y alcoholic solution 0,5%	1x500 ml	05-M10009
	1x1 l	05-10009/L
	1x2,5 l	05-10009E
Eosin Y Plus alcoholic solution	1x1 l	05-11007/L
Eosin Phloxin solution	1x500 ml	05-M10020
	1x1 l	05-10020/L
Ziehl carbol fuchsin	1x500 ml	05-M20007
Fuchsin ponceau Masson	1x150 ml	05-B10005
Giemsa Pappenhaim	1x500 ml	05-M12005
	1x1 l	05-12005/L
	1x2,5 l	05-12005E
Luxol fast blue Klüver Barrera	1x150 ml	05-B18001
May Grunwald Pappenheim	1x500 ml	05-M12002
	1x1 l	05-12002/L
	1x2,5 l	05-12002E
Nuclear Fast Red	1x150 ml	05-B07006
	1x500 ml	05-M07006
Picrofuchsin Van Gieson	1x500 ml	05-M10012
Picro Mallory – Acid Fuchsin	1x150 ml	05-B10014
Schiff's reagent Feulgen	1x500 ml	05-M07007
Schiff's reagent Hotchkiss McManus	1x500 ml	05-M20001
Safranin solution	1x1 l	05-07008/L
Sudan III Herxheimer	1x150 ml	05-B27001
Sudan Black	1x150 ml	05-B27002
Light green Goldner	1x500 ml	05-M10008



Bio-Optica



Reagents

PRODUCT AND DESCRIPTION	PACK	CODE
Phosphomolybdic acid Masson	1x500 ml	05-M05003
Periodic acid 1%	1x500 ml	05-M05030
Picric acid aqueous solution 1.2%	1x500 ml	05-M05027
Scott's water	10x500 ml	05-M05023
Albumine Mallory	1x150 ml	05-B04002
Alcohol Borax Mowry	1x150 ml	05-B05011
Lithium Carbonate solution	1x500 ml	05-M05016
Lugol solution	1x500 ml	05-M05015

Mount Quick Aqueous

Synthetic mounting medium, dissolved in water. For use when dehydration causes loss of staining characteristics.
Compatible with hematoxylin-eosin.

PACK	CODE
9x30 ml	05-1740

Immersion oil for microscopes

Type A oil for microscopes.

PACK	CODE
1x30 ml	08-1730/A30
9x30 ml	08-1730/A270

BioMount HM

Synthetic mounting medium, dissolved in xylene, particularly indicated for use with the automatic coverslipper.

PACK	CODE
1x100 ml	05-BMHM100
8x500 ml	05-BMHM508

CVR Mount

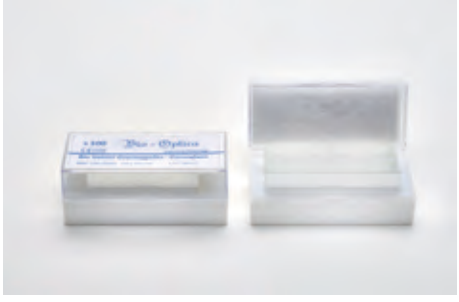
Xylene based and isoparaffin based mounting medium, indicated for use with the automatic coverslipper.

PRODUCT	PACK	CODE
CVR Mount	1x500 ml	05-CVR500
CVR Mount Ultra (Isoparaffin)	1x500 ml	05-CVR501

Coverslips

Cleaned, degreased, high-quality coverglasses; free from dust, dirt and cracks.

DIMENSIONS	PACK	CODE
24 x 40 mm	1000 pcs.	09-2040
24 x 50 mm	1000 pcs.	09-2050
24 x 60 mm	1000 pcs.	09-2060
50 x 65 mm	1000 pcs.	09-5065




Bio - Optica
Improving Pathology
05-9803S Bio-Agar
for cytoinclusion
2°C 8°C
1019
2021-03
IVD
10 ml

p. 120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Improving Pathology
www.bio-optica.it
500 ml
IVD
2021-03
1019

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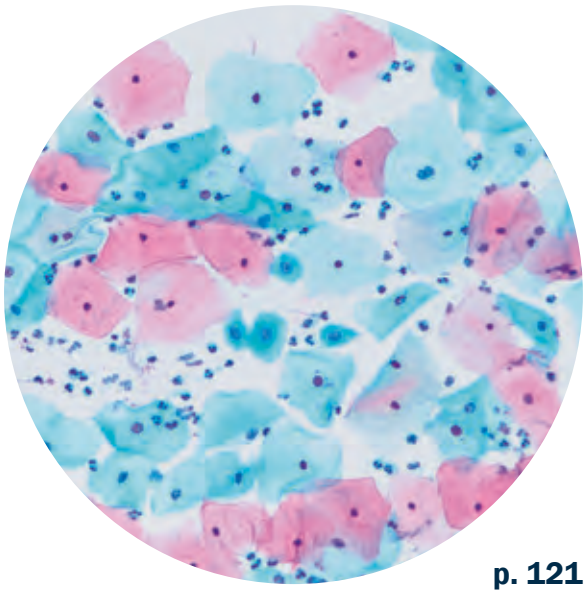

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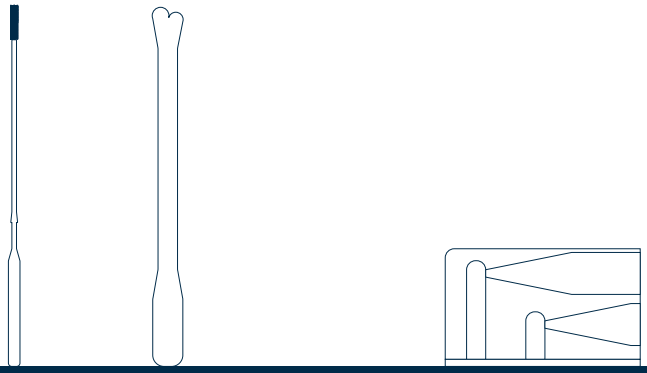


Dual cyto cuvettes

Centrifugation cuvettes with dual chamber.

PRODUCT	PACK	CODE
Medium absorption	500 pcs.	14-080
High absorption	500 pcs.	14-070

Fixatives

PRODUCT AND DESCRIPTION	PACK	CODE
Cy-Fix Fixative for liquid-based cytology	54x25 ml	05-01C50P
Bio-fix Spray fixative for vaginal cytology	4x200 ml	05-X200
Saccomanno's Fixative Fixative for samples with mucus	1x1 l	05-01043/L

Bio-Agar for embedding cytological samples

Aqueous gel for embedding cytological samples, encapsulates and retains cells during processing. Useful for processing centrifuged cells and fragile biopsies.

PRODUCT	CODE
15x10 ml	05-9803S

Papanicolaou staining solutions

Fast staining, bright colors and excellent cellular details.
The solutions are methanol-free.

	PRODUCT	PACK	CODE
●	**Papanicolaou Harris hematoxylin**	1x500 ml	05-12011
		1x1 l	05-12011/L
		1x2,5 l	05-12011E
●	**Papanicolaou OG6**	1x500 ml	05-12013
		1x1 l	05-12013/L
		1x2,5 l	05-12013E
●	**Papanicolaou EA50**	1x500 ml	05-12019
		1x1 l	05-12019/L
		1x2,5 l	05-12019E
●	**Papanicolaou EA65**	1x500 ml	05-12017
		1x1 l	05-12017/L

May Grünwald Giemsa solutions

Ready-to-use solutions for the differentiation of cellular elements in blood smears, spleen tissue samples, lymph node tissue and bone marrow biopsies.

	PRODUCT	PACK	CODE
	May Grünwald	1x500 ml	05-M12002
●		1x1 l	05-12002/L
		1x2,5 l	05-12002E
	Giemsa	1x500 ml	05-M12005
●		1x1 l	05-12005/L
		1x2,5 l	05-12005E
	May Grunwald Giemsa for smears	1x1 l	04-080802/L
●			

Bio-Optica

May Grünwald Giemsa kit

PRODUCT AND APPLICATION	CODE
May Grünwald Giemsa kit for smears	04-080802

Minimum number of tests that can be performed	50 preparations
Completion time	35 minutes
Shelf life	2 years
Storage conditions	15-25°C
Additional equipment	1000 ml calibrated flask, 100 ml graduated cylinder, 100 ml histology jar

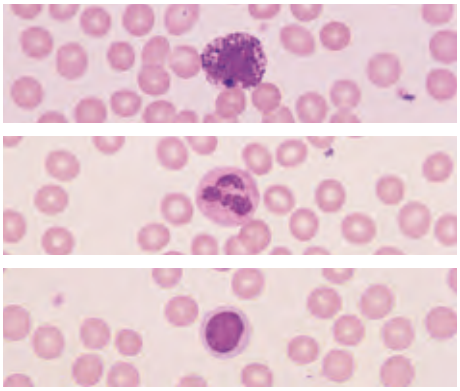
Application

For differential staining of cellular elements in blood smears, and spleen, lymph node and bone marrow tissue samples.

Method

- 1) Pour 100 ml of reagent B (buffer - concentrated solution) into a 1000 ml calibrated flask and top up to the required volume with tap water (buffer - work solution). Keep the two buffer solutions at 4° - 6° centigrade.
- 2) Dispense 10 drops of reagent A onto the slide; leave to act for 5 minutes. Note: Where considered appropriate, the above step can be performed by working in the jar without making any change to the times (in this case the reagent must be recovered).
- 3) Wash in running water for 1 minute.
- 4) Pour 10 ml of solution C into a cylinder containing 90 ml of buffer solution B (work solution), pour the mixture into a vertical histology jar and immerse the slide in it for 15 minutes.
- 5) Wash in running water for 1 - 2 minutes.
- 6) Wash the slide first in filter paper, then in the air for 5 minutes.

Results



Result	
Nuclei	violet red, pink
Basophilic cytoplasm	blue
Acidophilic cytoplasm	light red – pink
Polychromatic cytoplasm	gray – violet
Acidophilic granules	orange
Neutrophilic granules	brown – pink
Basophilic granules	dark violet
Azurophilic granules	purple – violet

MGG Quick Stain

PRODUCT AND APPLICATION	CODE
MGG Quick Stain	04-090805

Minimum number of tests that can be performed	100
Completion time	20 seconds
Shelf life	2 years
Storage conditions	15-25 °C
Additional equipment	Not required

Application

Rapid method for differential staining of formed blood elements and other air-dried cellular smears.

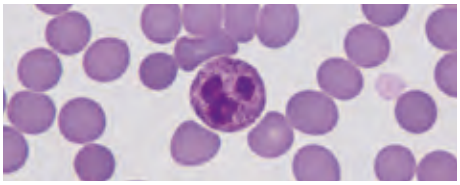
Method

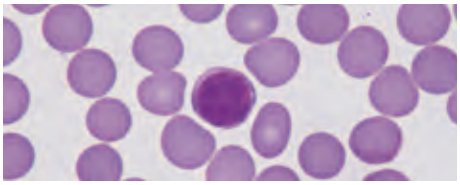
- 1) Dry the smear in air.
- 2) Immerse the slide 5 times for 1 second in solution A. After each immersion, wait a moment for the excess liquid to drain off.
- 3) Immerse the slide 5 times for 1 second in solution B. After each immersion, wait a moment for the excess liquid to drain off.
- 4) Immerse the slide 3-5 times for 1 second in the solution C. After each immersion, wait a moment for the excess liquid to drain off.
- 5) Wash in tap water.
- 6) Dry in the air (do not use heat sources, ovens or plates).

PRODUCT AND APPLICATION	PACK	CODE
MGG Quick Stain	0,5 l - 2 bottles of reagent A + 1 bottle of reagent B + 1 bottle of reagent C	04-090805M

Result
The colors and details are superimposable on those of May Grunwald Giemsa standard staining

Results





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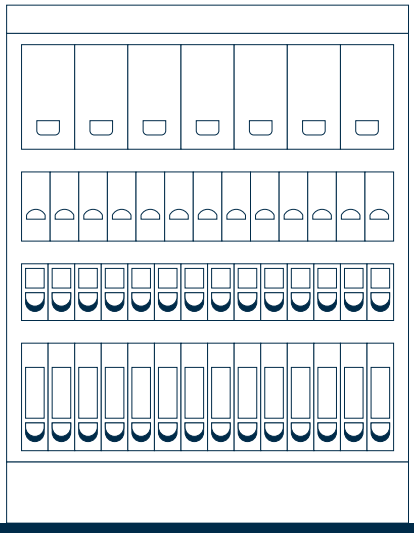
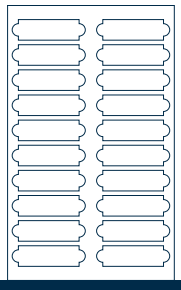
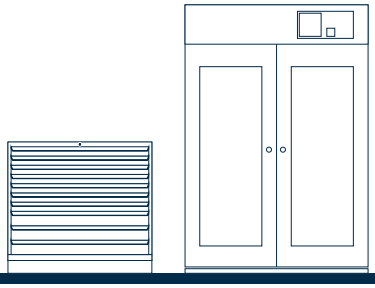






Bio-Optica

High-capacity filing cabinets

Painted steel filing cabinets with blue epoxy powder coating, electrostatically applied, without solvents for environmental integrity, resistant to common chemical aggression.
Each drawer is mounted on sliding guides, thus providing access to the entire surface area.
Its interior is equipped with plastic trays (code 03-C28N) for more effective archiving of both slides and embedded blocks.
They are equipped with central locking, available in three versions:

- Lock with security cylinder, including anti-tip system (only possible to open one drawer at a time)
- Code lock: uses a numerical combination in place of a key
- Remote lock: electronic system with manual remote controls

PRODUCT	CAPACITY (nr. DISHES)	DRAWERS	DIMENSIONS (1023x725xh)	WEIGHT KG	CODE
For slides	67200 (140)	5	700 mm	150	03-V77000B
	94080 (196)	7	1000 mm	196	03-V109000B
	134400 (280)	10	1325 mm	267	03-V155000B
	147840 (308)	11	1450 mm	292	03-V171000B
	161280 (336)	12	1625 mm	300	03-V186500B
For cassettes	26880 (336)	12	1000 mm	274	03-B34000B
	31360 (392)	14	1150 mm	316	03-B39650B
	35840 (448)	16	1325 mm	351	03-B45320B
	40320 (504)	18	1450 mm	402	03-B51000B
	44800 (560)	20	1625 mm	447	03-B56600B
For slides and cassettes	80640 S 17920 C	14 (S6 and C8)	1450 mm	338	03-V92B23B
	80640 S 22400 C	16 (S6 and C10)	1550 mm	400	03-V80B22B

Wheeled filing cabinets

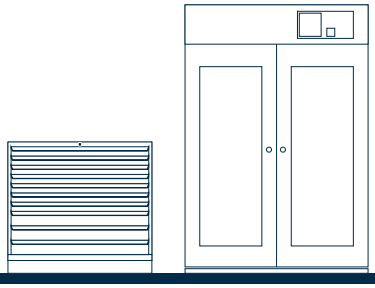
Archives for slides or blocks equipped with wheels and handles for transport.
The top of the filing cabinet is equipped with a blue grooved mat with containment lip so that trays of slides can be placed on it without slipping and falling in transit.
There are also three different types of lock to choose from for these filing cabinets:

- Key lock
- Code lock
- Remote lock

PRODUCT	CAPACITY	DRAVERS	DISHES	DIMENSIONS MM	WEIGHT KG (EMPTY)	CODE
For cassettes	11520	12	144	564x725x1000	188	03-B13440B
For slides	51840	9	108	564x725x1000	159	03-V60480B
For slides and cassettes	34560 slides 3840 cassettes	10 (6 for slides and 4 for cassettes)	120	564x725x1000	168	03-V40B4B

Accessories for high-capacity filing cabinets

PRODUCT	CODE
Tray for slides and embedded blocks	03-C28N
Tray slides and cassettes for large samples	03-C28S
Steel base for filing cabinets, designed for use with pallet trucks	03-90320120
Separation spring - 4 pcs	03-5000-MDL
Key lock	03-820.002
Code lock	03-820.011



Bio-Optica

Modular filing cabinets

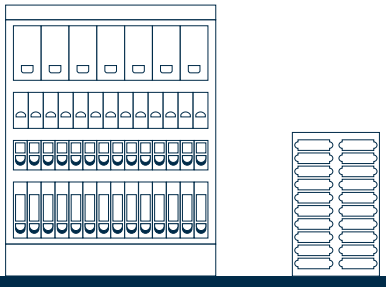
Histoslide - Histoblock

Modular systems for filing slides and paraffin-embedded preparations.
The Histoslide modules (for slides) and Histoblock modules (for cassettes) are made entirely of white enameled metal.
They consist of sliding drawers fitted on guides. Each block of Histoslide/Histoblock modules requires completion with a base and top.
The special 7-drawer version for large slides or super mega cassettes retains the same modular form.
The spacer spring is recommended for keeping the slides in a vertical position with the correct spacing between them.

Characteristics

Dimensions (W x D x H):	Histoslide - 490 x 490 x 140 mm Histoblock - 490 x 490 x 90 mm
Weight per module:	13 kg empty, approximately 20 kg with cassettes, approximately 40 kg with slides
Capacity per module:	Histoslide - up to 5000 slides Histoblock - up to 860 cassettes or 540 rings
Recommended stacking of modules:	Up to 10 Histoslide 15 Histoblock
Number of drawers per module:	14

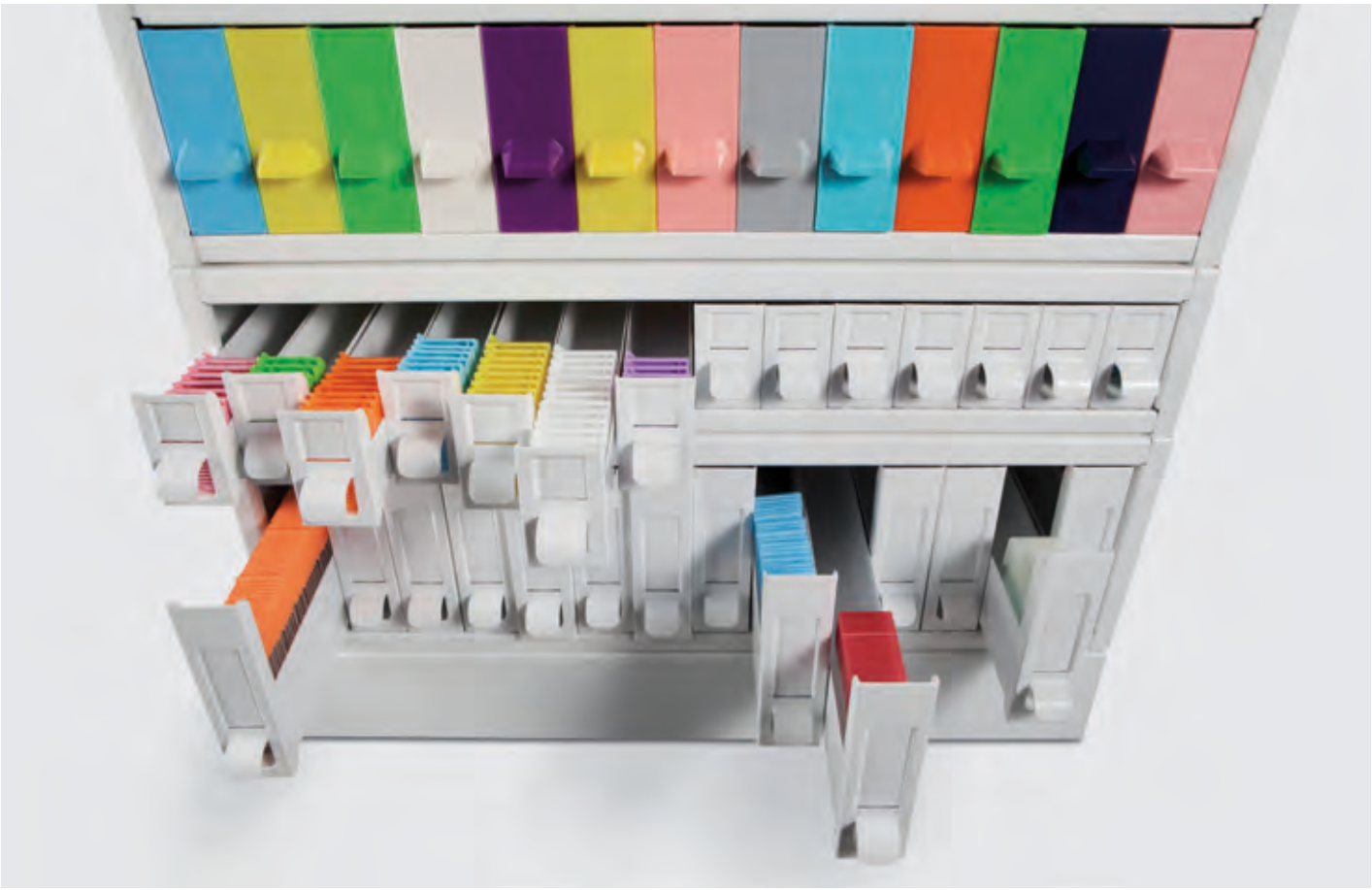
PRODUCT	CODE
Histoslide for slides	03-5000-14
Histoblock for cassettes	03-B900
Histoslide with 7 drawers for large samples	03-7000
Base	03-5000-BA
Top	03-5000-C0
Spacer spring	03-5000-MD

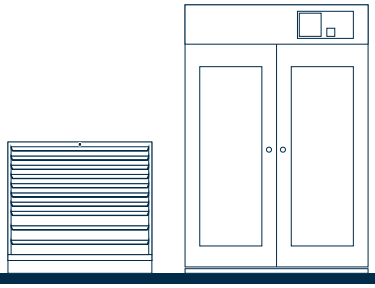


PRODUCT		CODE
Base		03-5000-BA
Top		03-5000-CO
Metal structure		03-COLOR13
Plastic drawer	white with dividers for slides	03-CA7100S
	orange with dividers for slides	03-CA7110S
	light blue with dividers for slides	03-CA7120S
	yellow with dividers for slides	03-CA7130S
	lilac with dividers for slides	03-CA7140S
	pink with dividers for slides	03-CA7150S
	green with dividers for slides	03-CA7160S
	gray with dividers for slides	03-CA7180S
	white	03-CA7100
	orange	03-CA7110
	blue	03-CA7120
	yellow	03-CA7130
	lilac	03-CA7140
	pink	03-CA7150
	green	03-CA7160
	gray	03-CA7180

Colorteca

Modular system for filing slides and paraffin-embedded preparations.
The plastic drawers are specifically designed to contain both slides and embedded preparations.
The drawers are available in 8 different colors, which can easily be associated with the colors of the slides or blocks stored in them.
Each module consists of 13 drawers and each drawer can contain approximately 330 slides or 48 blocks or 24 rings.
The external dimensions of each module are the same as those of the Histoslide modules (code 03- 5000-14) and Histoblock modules (code 03- B900); this means you can stack Colorteca on top of an existing filing cabinet.





Bio - Optica

Bio Block

Modular plastic 8-drawer filing cabinet for paraffin-embedded preparations (cassettes or rings). Each drawer has seven compartments. The total capacity of one Bio Block is approximately 2,250 cassettes. Bio Block is outstandingly modular thanks to its handy fastening system, which makes it possible to add modules both vertically and horizontally.

DIMENSIONS	PACK	CODE
240x300x400 mm	1 pc.	03-3000

Cartoglass - Cartoblock

Modular systems in strong, lightweight cardboard, which are easy to transport even when completely filled.
The Cartoglass modules (for slides) and Cartobloc modules (for cassettes) are equipped with internal partitions, also made of cardboard, so as to create 36 compartments in the Cartoglass module and 16 compartments in the Cartobloc module.

PRODUCT	CAPACITY PER MODULE	DIMENSIONS	PACK	CODE
Cartoglass	3000 slides	290x400x80 mm	10 pcs.	03-4015-BA
Cartoblock	320 cassettes 220 rings	290x400x45 mm	10 pcs.	03-4010-BC
Cover		290x400x15 mm	10 pcs.	03-4020-CO

Plastic slide boxes

Stackable, made of shockproof material. Supplied complete with record form for the classification of preparations.

PRODUCT	DIMENSIONS	PACK	CODE
25 slides	98x83x38 mm	1 pc.	44-13071
50 slides	230x97x35 mm	1 pc.	44-13072
100 slides	230x180x35 mm	1 pc.	44-13073

Cardboard slide trays

Trays for classifying and filing standard size slides (25x75 mm or 26x76 mm).

PRODUCT	PACK	DIMENSIONS	CODE
2 slides with lid	1 pc.	102x94 mm	09-0002
6 slides with lid	1 pc.	213x102 mm	09-0006
10 slides with lid	1 pc.	342x102 mm	09-0010
20 slides	1 pc.	342x205 mm	09-0000
20 slides with dividers	1 pc.	342x205 mm	09-0020
20 slides with lid	1 pc.	342x205 mm	09-0001
20 slides with dividers and lid	1 pc.	342x205 mm	09-0023

Plastic slide trays

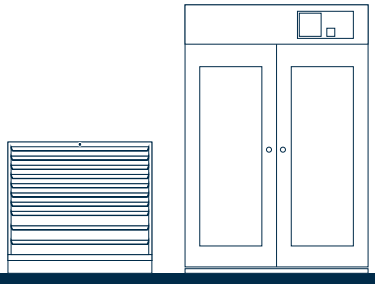
Trays for classifying and filing standard size slides (25x75 mm or 26x76 mm).

PRODUCT	PACK	DIMENSIONS	CODE
20 slides	20 pcs.	190x340 mm	44-13081
40 slides	10 pcs.	395x340 mm	44-13082

Slide mailers

Made of shock-proof plastic.

PRODUCT	PACK	DIMENSIONS	CODE
With press cap x5 slides	50 pcs.	28x82x16 mm	09-000530
With screw cap x5-10 slides	10 pcs.	ø 40xh 90 mm	44-13061
Snap-on x1 slide	500 pcs.	50x100x6 mm	44-13031
Snap-on x2 slides	500 pcs.	73x85x6 mm	44-13041
Snap-on x3 slides	100 pcs.	100x84x6 mm	44-13051



Bio-Optica

Safety cabinets with extractor system

Cabinets with extractor system, designed for storing histological samples preserved in formalin, or storing chemicals and solvents.

Construction features

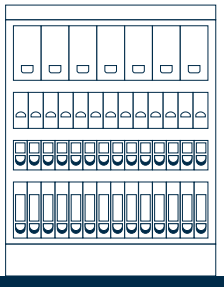
- Electrogalvanized steel structure
- Three tray-type shelves, height-adjustable
- Leaf doors made of safety glass

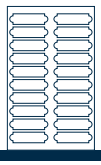
Extractor system

- Non-sparking extractor
- Alumina pellet filters for formaldehyde
- Manifold for connection to central extractor systems
- Control panel with soft-touch keypad for setting the desired operating parameters

PRODUCT	EXTERNAL DIMENSIONS	INTERNAL DIMENSIONS	CODE
Chemical Cabinet	1200 x 550 x 1900 mm	1180x490x1580 mm	50-120-603
Formalin Cabinet	1200 x 550 x 1900 mm	1180x490x1580 mm	50-120-604

ACCESSORIES	CODE
Additional shelf	50-600-062
Formalin filter	50-F001
Solvent filter	50-F002
HEPA filter	50-F006
UV Lamp	50-600-051





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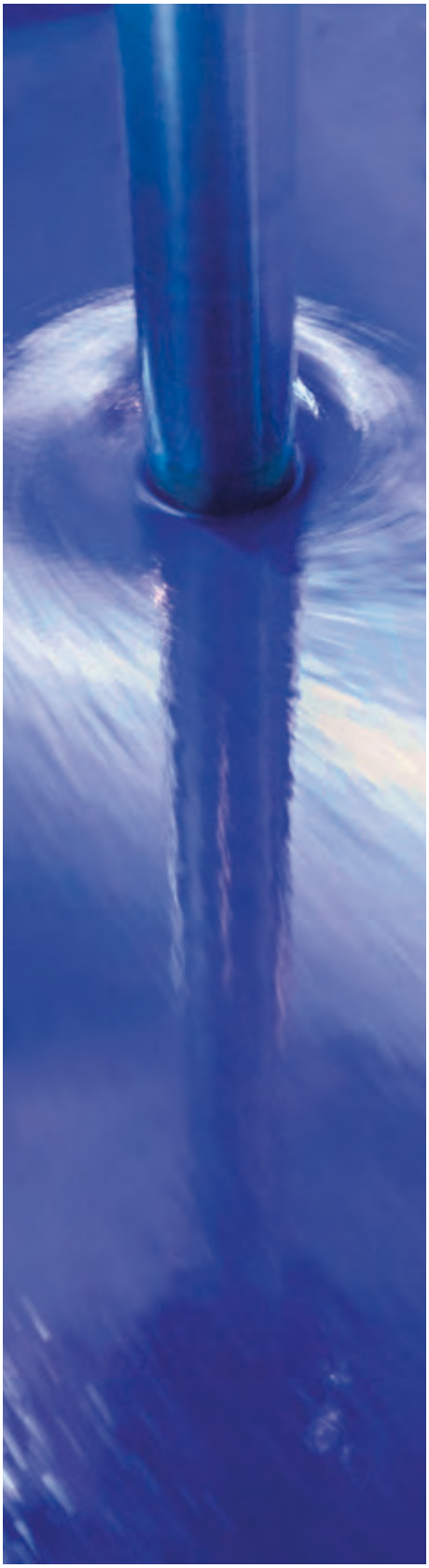
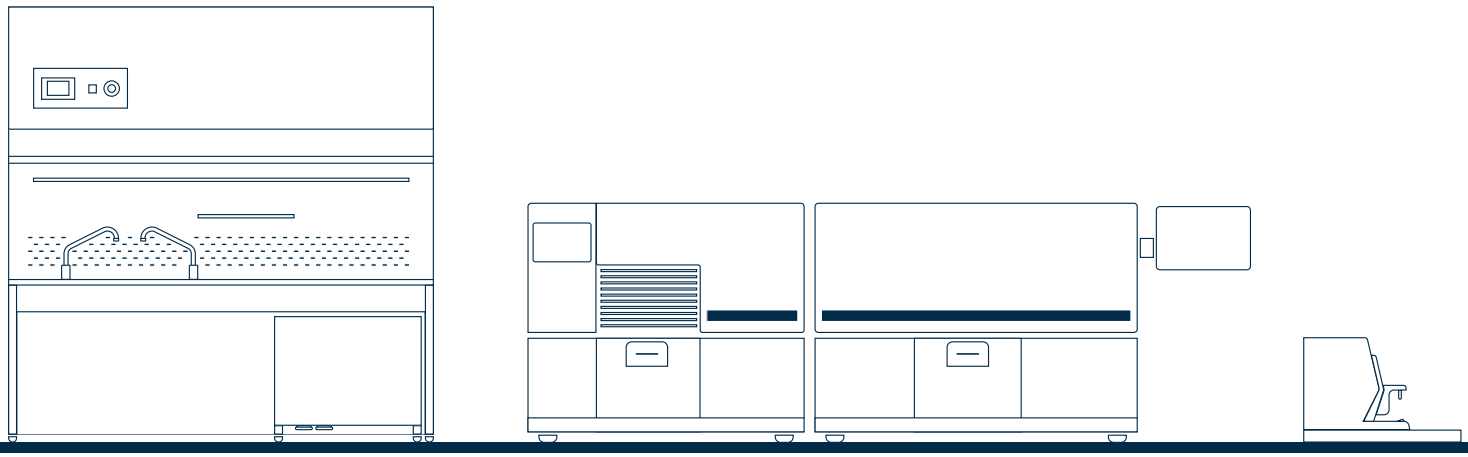


Design, art direction and coordination by Giulia Vrespa - Photo by Studioneon



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