

MASSON TRICHROME KIT



IVD *In vitro* diagnostic medical device

Classified acc. to Regulation (EU) 2017/746 - Class A device

Seven-reagent muscle and collagen fiber staining kit

INSTRUCTIONS FOR USE

BASIC UDI number	385889212HPC30708STARVF		
EMDN code	W01030708		
REF	Catalog number	Volume	UDI-DI number
MST-100T		100 tests	0385888822774
MST-K-100		7 x 100 mL	03858892125281
MST-K-500		7 x 500 mL	03858892125274



Intended use and test principle

Masson Trichrome kit is used for visualization of muscles, collagen fibers, connective tissues, gametes, nuclei, neurofibrils, neuroglia, collagen, keratin intracellular fibrils and negative visualization of the Golgi apparatus. Method of staining muscle and collagen fibers in tissues during which Aniline Blue dye binds with collagen making it turn distinct blue. It is also used for visualization of increased collagen build up associated with functioning tissue being mistaken for scar tissue (liver sclerosis diagnosis), but also for differentiating smooth muscle fibers and collagens.

Product description

- **MASSON TRICHROME KIT** – seven – reagent kit for staining muscle and collagen fibers

The kit contains:	100 tests (MST-100T)	7 x 100 mL (MST-K-100)	7 x 500 mL (MST-K-500)	Storage temperature
Bouin solution	100 mL (BOU-OT-100)	100 mL (BOU-OT-100)	500 mL (BOU-OT-500)	15-25 °C
Hematoxylin, Weigert A	30 mL (HEMA-OT-30)	100 mL (HEMA-OT-100)	500 mL (HEMA-OT-500)	15-25 °C
Ferri reagent, Weigert B	30 mL (FR-OT-30)	100 mL (FR-OT-100)	500 mL (FR-OT-500)	15-25 °C
Biebrich Scarlet-Acid Fuchsin reagent	30 mL (BSAF-OT-30)	100 mL (BSAF-OT-100)	500 mL (BSAF-OT-500)	15-25 °C
P.T.A.-P.M.A. reagent	30 mL (PPR-OT-30)	100 mL (PPR-OT-100)	500 mL (PPR-OT-500)	15-25 °C
Aniline Blue reagent	30 mL (ABR-OT-30)	100 mL (ABR-OT-100)	500 mL (ABR-OT-500)	15-25 °C
Acetic acid, 1% solution	30 mL (OK1-OT-30)	100 mL (OK1-OT-100)	500 mL (OK1-OT-500)	15-25 °C

Additional reagents and materials that can be used in this method

- Fixatives such as BioGnost's neutral buffered formaldehyde solutions: Formaldehyde NB 4%, Formaldehyde NB 10%
- Dehydrating/rehydrating agent, such as BioGnost's alcohol solutions: Histanol 70, Histanol 80, Histanol 95 and Histanol 100
- Clearing agent, such as BioClear xylene or its aliphatic hydrocarbon substitutes, such as BioClear New
- Infiltration and embedding agent, such as BioGnost's granulated paraffin BioWax Plus 56/58, BioWax 56/68, BioWax Blue
- Covering agents for microscopic sections and mounting cover glass, such as BioGnost's BioMount, BioMount High, BioMount M, BioMount New, BioMount DPX, BioMount DPX High, BioMount DPX Low, BioMount C, BioMount Aqua
- VitroGnost slides and coverslips for use in histopathology and cytology
- BioGnost's immersion oils, such as Immersion oil, Cedarwood oil, Immersion oils types A and C, FF, 37 or Tropical Grade

Preparation of histological sections for staining

- Fix (Formaldehyde NB 4%, Formaldehyde NB 10%) and process the tissue sample
- Embed the tissue in a paraffin block (BioWax 52/54, BioWax 56/58, BioWax Plus 56/58, BioWax Blue)
- Cut the paraffin block into 4-6 µm thin slices and mount on a VitroGnost microscope slide

NOTE

Apply the reagent so it completely covers the section.

Sample staining procedure

a) using kit for 100 tests (MST-100T)

1.	Deparaffinize in xylene (BioClear) or xylene substitute (BioClear New)	3 exchanges, 2 min each
2.	Rehydrate in 100% alcohol (Histanol 100)	2 exchanges, 5 and 3 min
3.	Rehydrate in 95% alcohol (Histanol 95)	2 min
4.	Rehydrate in distilled/demineralized water	2 min
5.	Immerse into Bouin's solution	60 min at 56 °C or overnight at room temperature
6.	Cool slide to room temperature	10 min
7.	Rinse under tap water	10 sec
8.	Rinse in distilled/demineralized water	10 sec
9.	Apply 5 drops of Hemaxilin, Weigert A and 5 drops of Ferri reagent, Weigert B. Stir gently and let it react.	15-20 min
10.	Rinse under tap water	3 min
11.	Stain using Biebrich Scarlet-Acid Fuchsin reagent (≥5 drops)	20 min
12.	Rinse in distilled/demineralized water	until the excessive dye is washed off of the section
13.	Add PTA-PMA reagent (≥5 drops)	10 min
14.	Pour the reagent off the slide without rinsing	
15.	Stain using Aniline Blue reagent (≥5 drops)	5-7 min
16.	Rinse in distilled/demineralized water	until the excessive dye is washed off of the section
17.	Add Acetic acid, 1% solution (≥5 drops)	1-2 sec
18.	Dehydrate in 95% alcohol (Histanol 95)	5 dips
19.	Dehydrate in 100% alcohol (Histanol 100)	2 min
20.	Clear the section in xylene (BioClear) or in a xylene substitute (BioClear New)	2 exchanges, 2 min each

Immediately after clearing apply an appropriate BioMount medium for covering/mounting on the section. If BioClear xylene was used, use one of BioGnost's mounting xylene-based media (BioMount, BioMount High, BioMount M, BioMount DPX, BioMount C, or universal BioMount New). If BioClear New xylene substitute was used, the appropriate covering agent is BioMount New. Cover the section with VitroGnost cover glass.

b) using seven-reagent 100 mL or 500 ml kit (MST-K-100, MST-K-500)

Pour the reagents into glass staining jars (Coplin, Hellendahl or Schifferdecker), return to original bottles after staining. Close tightly. Filter the reagents if necessary.

1.	Deparaffinize in xylene (BioClear) or xylene substitute (BioClear New)	3 exchanges, 2 min each
2.	Rehydrate in 100% alcohol (Histanol 100)	2 exchanges, 5 and 3 min
3.	Rehydrate in 95% alcohol (Histanol 95)	2 min

4.	Rehydrate in distilled/demineralized water	2 min
5.	Immerse into Bouin's solution	60 min at 56 °C or overnight at room temperature
6.	Cool slide to room temperature	10 min
7.	Rinse under tap water	10 sec
8.	Rinse in distilled/demineralized water	10 sec
9.	Prepare Weigert hematoxylin working solution: mix equal volumes of Hematoxylin, Weigert A and Ferri reagent, Weigert B	
	Note: working solution is stable for approximately 2 weeks. Prepare the working solution of volume adequate for staining test sections	
10.	Immerse into Weigert hematoxylin working solution and let it react	15-20 min
11.	Rinse under tap water	3 min
12.	Immerse into Biebrich Scarlet-Acid Fuchsin reagent	20 min
13.	Rinse distilled/demineralized water	until the excessive dye is washed off of the section
14.	Immerse into PTA-PMA reagent	10 min
15.	Pour the reagent off the section without rinsing	
16.	Stain using Aniline Blue reagent	5-7 min
17.	Rinse in distilled/demineralized water	until the excessive dye is washed off of the section
18.	Immerse into Acetic acid, 1% solution	1-2 dips
19.	Dehydrate in 95% alcohol (Histanol 95)	5 dips
20.	Dehydrate in 100% alcohol (Histanol 100)	2 min
21.	Clear in xylene (BioClear) or xylene substitute (BioClear New)	2 exchanges, 2 min each

Immediately after clearing apply an appropriate BioMount medium for covering/mounting on the section. If BioClear xylene was used, use one of BioGnost's mounting xylene-based media (BioMount, BioMount High, BioMount M, BioMount DPX, BioMount C, or universal BioMount New). If BioClear New xylene substitute was used, the appropriate covering agent is BioMount New. Cover the section with VitroGnost cover glass.

Result

Nuclei – blue-purple
Muscle fibers, keratin, cytoplasm - bright red
Collagen, mucus – blue
Erythrocytes – yellow to orange- red

Limitations

This product is intended for professional laboratory use for diagnostic purposes only. Deviations from the staining procedure described in this Instruction for use may cause differences in staining results.

Sample preparation and diagnostics

Use only appropriate instruments for collecting and preparing the samples. Process the samples using modern technology and mark them clearly. Be sure to follow the manufacturer's handling instructions. To avoid errors, staining and diagnosis can only be carried out by qualified personnel. Use a microscope equipped according to medical diagnostic laboratory standards.

If a serious incident occurs during use of this product or as a result of its use, please report it to the manufacturer or authorized representative and competent authority.

Safety at work and environmental protection

Handle the product in accordance with occupational health and environmental protection guidelines. Used and expired solutions must be disposed of as special waste following national guidelines. Reagents used in this procedure can pose a danger to human health. The examined tissue samples are potentially infectious, and it is necessary to take the measures needed to protect human health in accordance with the guidelines of good laboratory practice. It is mandatory to read and act according to the information and warning signs printed on the product label and in the Safety Data Sheet, which is available on request.

Storage, stability, and shelf life

Upon receipt, store the product in a dry place and well-closed original packaging at a temperature of +15 °C to +25 °C. Do not freeze or expose to direct sunlight. After first opening, the product can be used until the specified expiry date, if stored properly. The expiration date is printed on the product label.

References

- Culling, C.F.A. (1974): Handbook of histopathological and histochemical techniques, 2 ed ed., Butterworth, London, UK.
- Lillie, R.D. (1945): Studies on selective staining of collagen with acid aniline dyes, J. Technical Methods, 25:1
- Melis, M., Carpino, F., Di Tondo, U. (1989), Tecniche in anatomia patologica, Edi Ermes, Milano.
- Sheehan D.C. et Hrapchak, B.B. (1980): Theory and Practice Histotechnology, 2nd ed., CV Mosby, St. Louis, (MO), pp 52, str. 14-167.

Warnings and precautions regarding the materials contained in the product:

	H225	Highly flammable liquid and vapor.
	H302	Harmful if swallowed.
	H312	Harmful in contact with skin.
	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
	H319	Causes serious eye irritation.
	H332	Harmful if inhaled.
	H335	May cause respiratory irritation.
	H341	Suspected of causing genetic defects.
	H350	May cause cancer.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.	
P233	Keep container tightly closed.	
P280	Wear protective gloves/protective clothing/eye protection/face protection.	
P301+P330+P331	IF SWALLOWED: rinse mouth, do NOT induce vomiting.	
P302+P352	IF ON SKIN: wash with plenty of water	
P304+P340	IF INHALED: remove person to fresh air and keep comfortable for breathing.	
P305+P351+P338	IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.	
P308+P313	IF exposed or concerned: get medical advice/attention.	

MST-IFU_ENV10, 19.02.2026., iSP

Manufacturer	Batch code	Consult instructions for use	Contains sufficient for <n>tests	Contains hazardous substances
Date of manufacture	Catalogue number	Caution	European conformity	
Use-by date	Temperature limit	In vitro diagnostic medical device	Unique device identifier	

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Version	Description / reason for change	Date
10	Revised in acc. to Regulation (EU) 2017/746 - IVDR	19.02.2026.